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Terms	Documents
glutamine adj synthetase.ab. and transformation.ab. and plant.ab.	0

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<u>L6</u>	glutamine adj synthetase.ab. and transformation.ab. and plant.ab.	0	<u>L6</u>
<u>L5</u>	glutamine adj synthetase.ab. and transformation and plant.ab.	7	<u>L5</u>
<u>L4</u>	glutamine adj synthetase and transformation and plant.ab.	429	<u>L4</u>
<u>L3</u>	glutamine adj synthetase and transformation and plant	558	<u>L3</u>
<u>L2</u>	glutamine adj synthetase and transformation	681	<u>L2</u>
<u>L1</u>	glutamine adj synthetase and 35s and npt and pbin	0	<u>L1</u>

END OF SEARCH HISTORY

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Terms	Documents
populus adj tremula	7

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US Pre-Grant Publication Full-Text Database

JPO Abstracts Database

EPO Abstracts Database

Derwent World Patents Index

Database: IBM Technical Disclosure Bulletins

Search:

L4

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<u>L4</u>	populus adj tremula	7	<u>L4</u>
<u>L3</u>	populus adj tremula and populus adj alba	0	<u>L3</u>
<u>L2</u>	inra adj 717	0	<u>L2</u>
<u>L1</u>	inra adj 717 and populus and transformation	0	<u>L1</u>

END OF SEARCH HISTORY

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NEWS 4 Feb 01 ERELIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5 Feb 10 Access via Tynnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 02 Gene Names now available in BIOSIS
NEWS 7 Mar 11 ERELIT no longer available
NEWS 8 Mar 11 TOXICEMO no longer available
NEWS 9 Mar 12 US Environmental Priorities searched with P in CA/CAPLUS and USATELL
NEWS 10 Mar 12 NIPINSHI/CALC added for property searching in REGISTRY
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NEWS 16 Apr 11 Records from HLocm available in CAPLUS, HCAPLUS, and ZCAPLUS
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NEWS 19 Jun 04 New e-mail delivery for search results now available
NEWS 20 Jun 10 MEDLINE Reload
NEWS 21 Jun 10 PCTFUL has been reloaded

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SESSION

FULL ESTIMATE COST

0.21

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=> s expression(w)cassette and glutamine(w)synthetase and transform?

L1 3 EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE AND TRANSFORM

?

=> d 11 1-3

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 1992 ACS

AN 2000:153804 CAPLUS

DN 132:162081

TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canavar Rancos, Francisco; Gallardo Alba, Fernando

PA Rutgers, The State University of New Jersey, USA

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

BT Patent

LA English

FAN.CNT

	PATENT NO.	FIND	DATE	APPLICATION NO.	DATE
PI	WO 2000018726	A1	20000304	WO 1999-US18267	19990311
	W:	AE, AI, AM, AT, AU, AV, BA, BB, BG, BE, BY, CA, CH, CN, CR, CU, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MH, MI, MN, MO, MP, MQ, NR, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, EG, ES, MD, RU, TM, TM			
	RW:	BH, BM, KE, LS, MW, SD, SI, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GE, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, HE, ML, MR, NE, SN, TD, TG			
	A1 9957791	A1	20000306	A1 1999-57734	19990311
PRAI	US 1998-96031P	P	19980111		
	WO 1999-US18.67	W	19990311		

RE.CNT 3 THERE ARE 3 CITE REFERENCE AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 1 CAPLUS COPYRIGHT 1992 ACS

AN 1999:166745 CAPLUS

DN 130:219133

TI Engineering fumonisin mycotoxin resistance with Saccharomyces DNA sequences encoding an ABC transporter

IN Osoeid, Lina M.; Boss, Wendy F.; Mao, Cungui

PA North Carolina State University, USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

BT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9910514	A1	19990304	WO 1999-017146	19980321
	W:		AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GE, GH, GM, GR, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LG, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NI, NL, PL, PT, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:		GB, GR, HU, IE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SF, BJ, CF, CG, CI, CM, CA, CN, GM, ML, MR, NE, SN, TD, TG		
	AU 980919	A1	19990316	AU 1998-89190	19980325
PRAI	US 1997-015619	P	19970816		
	WO 1998-017546	W	19980815		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 1998:0102:0 CAPLUS

DN 122:2/152

T1 Testers and methods for site-specific integration of **transforming** DNA in mammalian cells

IN Reff, Mitchell E.; Barnett, Richard Spence; McLachlan, Karen Petta

PA IDEC Pharmaceuticals Corp., USA

SO PCT Int. Appl., 114 pp.

CODEN: PIXXL2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9841648	A1	19980324	WO 1998-US3935	19980309
	W:		AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GE, GH, GM, GR, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LG, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NI, NZ, PL, PT, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, EG, KZ, MD, RU, TJ, TM		
	RW:		GB, GR, HU, IE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SF, BJ, CF, CG, CI, CM, CA, CN, ML, MR, NE, SN, TD, TG		
	US 980689	A	19981113	US 1997-819666	19970614
	US 9808144	A	19991017	US 1998-03715	19980213
	AU 9804419	A1	19981112	AU 1998-64635	19980309
	AU 787151	B2	19910819		
	EP 981637	A1	19990311	EP 1998-010109	19980309
	R:		AT, BE, CH, CY, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI		
	BR 9808554	A	19990113	BR 1998-3584	19980309
	JP 2001516211	T2	20010925	JP 1998-040639	19980309
	NO 9804347	A	19981109	NO 1999-4397	19990910
PRAI	US 1997-019606	A	19970114		
	US 1998-03715	A	19980213		
	WO 1998-US3935	W	19980309		

=> s expression(w)cassette and glutamine(w)synthetase and plant

L2 2 EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE AND PLANT

=> a 12 1-2

L1 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 1998:0102:0 CAPLUS

DN 133:162039
 TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism
 IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando
 EA Rutgers, the State University of New Jersey, USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PIXXD
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000004724	A1	20 00124	WO 1999-US14267	19990811
	W:	AM, AL, AN, AT, AU, BA, BB, BG, BE, BY, CA, CH, CN, CR, CU, DD, DE, DF, DM, EE, EG, EH, EI, GB, GO, GE, GH, GM, GR, HU, ID, IL, IN, IS, JI, KE, KI, KF, KE, KZ, LI, LF, LR, LS, LT, LU, LV, MD, ME, MK, MN, MW, MX, NG, NZ, PL, PT, RG, RI, SD, SE, SG, SI, SK, SL, TC, TH, TE, TI, UA, UG, US, UE, VN, YU, ZA, ZW, AM, AR, BY, KG, KE, ME, RU, TI, TM			
	RW:	GH, GM, KE, LS, ME, SI, SL, SZ, UG, UA, AF, BE, CH, CY, DE, DK, EG, EI, EF, GB, GE, IE, IT, LU, MD, NI, PZ, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, HM, MR, NE, SN, TD, TG			
	AU 9957734	A1	2000004724	AU 1999-57734	19990811
PRAI	US 1998-060312	P	1998-06-11		
	WO 1999-US18167	W	1999-06-11		
RE.CNT	3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
 AN 1999:160745 CAPLUS
 DN 133:219131
 TI Engineering of a myxothiazin resistance with Saccharomyces DNA sequences encoding an ABC transporter
 IN Obeid, Lina M.; Bess, Wendy E.; Mao, Juncui
 EA North Carolina State University, USA
 SO PCT Int. Appl., 51 pp.
 CODEN: PIXXL2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9910514	A1	19990104	WO 1998-US17546	19980125
	W:	AL, AM, AT, AU, BA, BB, BG, BE, BY, CA, CH, CN, CU, CZ, DE, EE, EG, EH, EI, GB, GO, GE, GH, GM, GR, HU, ID, IL, IS, JP, KE, KG, KI, KF, KE, KZ, LI, LF, LR, LS, LT, LU, LV, MD, ME, MK, MN, MW, MX, NG, NZ, PL, PT, RG, RI, SD, SE, SG, SI, SK, SL, TC, TM, TR, TT, UA, UG, US, UE, VN, YU, ZA, ZW, AM, AR, BY, KG, KE, ME, RU, TI, TM			
	RW:	GH, GM, KE, LS, ME, SI, SL, SZ, UG, UA, AF, BE, CH, CY, DE, DK, EG, EI, EF, GB, GE, IE, IT, LU, MD, NI, PZ, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, HM, MR, NE, SN, TD, TG			
	AU 988910	A1	19990104	AU 1998-89190	19980325
PRAI	US 1998-05112	P	1998-05-26		
	WO 1998-US17546	W	1998-01-25		
RE.CNT	14	THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

=> s planr(w)expression(w)cassette and glutamine(w)synthetase
 L3 (PLANR(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE
 => s plant(w)expression(w)cassette and glutamine(w)synthetase
 L4 (PLANT(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE

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ENTRY
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TOTAL
SESSION
40.98

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FULL ESTIMATED COST

SINCE FILE
ENTRY
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TOTAL
SESSION
41.22

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=> s plant(w)expression(w)cassette and glutamine and transform?
L5 1 PLANT(W) EXPRESSION(W) CASSETTE AND GLUTAMINE AND TRANSFORM?

=> d 15 1

LL ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 2000:133167 CAPLUS
DN 132:176616

TI Expression of chitin synthase and chitin deacetylase genes in plants to
alter the cell wall for industrial uses and improved disease resistance
IN Bhogga, Kamarpal S.; Andersen, Paul C.; Nichols, Scott E.
PA Pioneer Hi-Bred International, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PEXK 2

BT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000019719	A2	20000124	WO 1999-US18450	19990813
	WO 2000019729	A3	20000811		
W:	AE, AI, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GR, GU, HK, HU, ID, IL, IN, IS, IT, KE, KG, KP, KR, KZ, LC, LF, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RC, RU, SD, SE, SG, SI, SK, SL, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AN, AZ, BY, EG, EN, MD, FU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9955610	A1	20000806	AU 1999-55610	19990813
PRAT	US 1998-985848	P	19980814		
	US 1999-US18450	X	19990813		

=> s plant(w)expression(w)cassette and glutamine(w)synthase and transform?
 L6 3 PLANT(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHASE AND
 TRANSFORM?

=> s plant(w)expression(w)cassette and transform?
 L7 40 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM?

=> duplicate remove L7
 DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, EMBASE, CAPLUS'
 KEEP DUPLICATES FROM MORE THAN ONE FILE: Y'(N:n
 PROCESSING COMPLETED FOR L7
 L8 L9 DUPLICATE REMOVE L7 (16 DUPLICATES REMOVED)

=> d 18 1-29

L8 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2002 ACS
 AN 2002:332302 CAPLUS
 DN 136:8048 0
 TI Expression cassettes using the myb11 promoter of Arabidopsis for
 tissue-specific expression of foreign genes in the embryonic epidermis and
 flower of plants
 IN Reindl, Andreas; Bischoff, Friedrich; Tonelli, Chiara; Petroni, Katia
 PA Basf Plant Science GmbH, Germany
 SO PCT Int. Appl., 64 pp.
 CODEN: PIKXDL
 DT Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002034924	A2	20020502	WO 2001-EP12444	20011026
W: AE, AG, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
DE 10053519	A1	20000502	DE 2000-10053519	20001027
PRAI DE 2000-10053519	A	20001027		

L8 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2002 ACS
 AN 2002:332302 CAPLUS
 DN 136:8048 0
 TI A caryopsis-specific promoter of wheat for use in the tissue-specific
 expression of foreign genes in cereal
 IN Sprunck, Stefanie; Kluth, Antje; Becker, Dirk; Luetticke, Stephanie;
 Lorenz, Horst
 PA Aventis CropScience GmbH, Germany
 SO PCT Int. Appl., 57 pp.
 CODEN: PIKXDL
 DT Patent
 LA German
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032785	A1	20020110	WO 2001-EP7592	20010703
W: AE, AG, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				

PL, PO, PY, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN, YU, ZA, AM,
 AZ, BY, BG, KZ, ML, PU, TJ, TM
 RW: GR, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

DE 10032379 A1 20020117 DE 2000-10032379 20000106
 DE 10041861 A1 20020314 DE 2000-10041861 20000326
 PRAI DE 2000-10032379 A 20000706
 DE 2000-10041861 A 20000826

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 1

AN 2001:186123 BIOSIS
 DN PREV200100186123
 TI Plant-derived measles virus hemagglutinin protein induces neutralizing
 antibodies in mice.
 AU Huang, Z.; Dry, I.; Webster, I.; Strugnell, R.; Wesselingh, S. (1)
 CS (1) Infectious Diseases Unit, Alfred Hospital, Monash University,
 Commercial Road, Prahran, VIC, 3181; s.wesselingh@alfred.org.au Australia
 SO Vaccine, 28 February, 2001 Vol. 19, No. 15-16, pp. 2163-2171. print.
 ISSN: 0264-1104.
 DT Article
 LA English
 SL English

L8 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2001 ACS

AN 2000:861811 CAPLUS

DN 134:26074

TI Maize P881 promoter and methods for its use in plant
 transformation

IN McElroy, David; Orozco, Emil M., Jr.; Kriz, Alan L.; Griffor, Matt
 PA Dekalb Genetics Corporation, USA

SO PCT Int. Appl., 142 pp.

CODEN: PIXXOR

DT Patent

LA English

FAN.CNT 1

PATENT NO.	IND	DATE	APPLICATION NO.	DATE
WO 2000/03474	A1	20001207	WO 2000-US13199	20000512
W: AE, AG, AI, AM, AN, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GF, GM, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LF, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TK, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AO, AS, BY, BS, BZ, CA, CH, CL, CN, CO, CR, CU, CY, DE, EW, GM, GR, KE, LS, MW, MZ, SD, SL, SE, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6222516	B1	20010515	US 1999-512038	19990514

PRAI US 1999-512038 A1 19990514

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2002 ACS

AN 2000:824430 CAPLUS

DN 133:359796

TI Maize P881 promoter and methods for its use in plant
 transformation

IN McElroy, David; Orozco, Emil M., Jr.; Laccetti, Lucille B.
 PA Dekalb Genetics Corporation, USA

SO PCT Int. Appl., 174 pp.

CODEN: PIXXD2

DI Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 20000976068	A1	20001123	WO 2000-US13304	20000512
W: AE, AG, AL, AM, AN, AO, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
US 6207879	B1	20010317	US 1999-312266	19990514
EP 1179074	A1	20020213	EP 2000-942636	20000512
R: AT, BE, CH, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, PL, RO				
PRAI US 1999-312266	A1	19990514		
WO 2000-US13304	W	20001123		
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 6 IF 29 CAPLUS COPYRIGHT 2002 ACS

AN 2000:824419 CAPLUS

DN 133:359798

TI The rice actin 2 promoter and intron and their use for plant transformation

IN McElroy, David; Wu, Ray

PA Dekalb Genetics Corporation, USA; Cornell Research Foundation, Inc.

SO PCT Int. Appl., 150 ps.

CODEN: PIXX13

DI Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 20000976068	A1	20001123	WO 2000-US13303	20000512
W: AE, AG, AL, AM, AN, AO, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
EP 1179074	A1	20020213	EP 2000-942636	20000512
R: AT, BE, CH, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, PL, RO				
PRAI US 1999-312266	A1	19990514		
WO 2000-US13303	W	20001123		
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 7 IF 29 CAPLUS COPYRIGHT 2002 ACS

AN 2000:824418 CAPLUS

DN 133:359794

TI Maize RS334 promoter and methods for its use in plant transformation

IN McElroy, David; Trozco, Emil M., Jr.; Laccetti, Lucille B.

PA Dekalb Genetics Corporation, USA

DT PAT Int. Appl., 173 pp.
 CODEN: PEXXDE
 TI Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000/0065	A1	20001123	WO 2000-US13301	20000512
	W:				
	AF, AG, AH, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CP,				
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	HN, IL, IN, IS, JP, KE, KG, KP, KR, LC, LK, LR, LS, LT, LU,				
	LV, MA, MI, MG, MP, MN, MW, NX, NO, NZ, PL, PT, RO, RU, SD, SE,				
	SG, SI, SK, SL, TC, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,				
	ZW, AM, AN, BY, FG, FM, MI, RU, TJ, TM				
	RW: BH, BM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				
	EG, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,				
	GI, GL, GN, GA, GU, GW, ML, MR, NE, NI, TD, TG				
	US 6194617	B1	20010217	US 1999-312185	19990514
	EP 1179017	A1	20020313	EP 1000-937456	20000512
	E: AI, BG, CH, DE, DK, ES, FR, GB, GR, IE, IL, LU, NL, SE, MC, PT,				
	FI, GI, IT, LV, NI, RO				
PPAI	US 1999-312185	A1	19990514		
	WO 2000-013301	W	20000512		
RE.CNT	4				
	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD				
	ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:133867 CAPLUS
 DN 132:176616
 TI Expression of chitin synthase and chitin deacetylase genes in plants to
 alter the cell wall for industrial uses and improved disease resistance
 IN Daugga, Parwarpal S.; Anderson, Paul C.; Nicols, Scott E.
 PA Pioneer Hi-Fred International, Inc., USA
 SO PCT Int. Appl., 51 pp.
 CODEN: PEXXDE
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000/0972	A2	20000524	WO 1999-US18450	19990813
	WO 2000/0972	A3	20000511		
	W:				
	AE, AI, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CP,				
	CU, CZ, DE, DK, DM, DS, EE, ES, FI, GB, GD, GE, GH, GM, GR, GU,				
	HN, IL, IN, IS, JP, KE, KG, KP, KR, LC, LK, LR, LS, LT, LU,				
	LV, MA, MI, MG, MP, MN, MW, NX, NO, NZ, PL, PT, RO, RU, SD, SE,				
	SG, SI, SK, SL, TC, TM, TR, TT, TZ, UA, UG, US, UZ,				
	ZW, AM, AN, BY, FG, FM, MI, RU, TJ, TM				
	RW: BH, BM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK,				
	EG, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,				
	GI, GL, GN, GA, GU, GW, ML, MR, NE, NI, TD, TG				
	AU 9955610	A1	20000306	AU 1999-15610	19990813
PRAI	US 1998-165514P	P	19980314		
	WO 1999-0318150	W	19990813		

L8 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:198106 CAPLUS
 DN 132:133819
 TI Use of scaffold attachment region (SAR) for improved plant
 transformation
 IN Horn, Michael E.; Hall, Gerald E., Jr.
 PA Myogen Plant Science, Inc., USA
 SO PCT Int. Appl., 36 pp.
 CODEN: PEXXDE

DT Patent
LA English
FAM.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006757	A1	20000210	WO 1999-US7594	19990406
	W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, PO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BA, BG, KZ, MD, RU, TC, TM				
	FW: CH, CM, KE, LS, MA, SD, SL, SE, SG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CN, GA, GN, GU, ML, MR, NE, SN, TD, TG				
	AU 9834764	A1	20000221	AU 1999-34763	19990406
PRAI	US 1998-117080	A	19980731		
	WO 1999-US7594	W	19990406		

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2002 ACS
AN 2000:099144 CAPLUS
DN 133:242324
TI Coat protein genes of 3 strains of cucumber mosaic virus for the preparation of virus-resistant plants
IN Boeshare, Nancy L.; McMaster, Russell J.; Tricoli, David M.; Reynolds, John F.; Barney, Kim J.
PA Seminis Vegetable Seeds, Inc., USA
SO U.S., 57 pp., Cont.-in-part of U.S. Ser. No. 367,783, abandoned.
CODEN: USKKAM

DT Patent
LA English
FAM.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6127611	A	20001005	US 1997-575233	19970929
	WO 9821044	A1	19980711	WO 1999-US7234	19990607
	W: AM, AT, AU, BE, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GE, GF, HU, JP, KE, KG, KP, KR, KZ, LF, LR, LT, LU, LV, MD, MG, MK, MW, MX, NO, NZ, PL, PT, PO, PU, SD, SE, SI, SK, TJ, TT, UA, UZ, VC				
	FW: FE, GE, SD, SG, SG, UG, AT, BE, CH, DE, IE, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SS, TC, TG				
	US 6842491	B1	20020129	US 2000-616567	20000714
PRAI	US 1994-187949	B2	19941130		
	WO 1995-US7234	W	19950607		
	US 1997-175233	A3	19970929		

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2002 ACS
AN 2001:471306 CAPLUS
DN 136:161364
TI Modification of sulfur metabolism in plants by overexpression of bacterial *cysE* and *cysK* genes
AU Blaszczyk, A.; Liszewska, F.; Brodzik, R.; Sirko, A.
CS Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw, 02-106, Pol.
SO NATO Science Series, Series A: Life Sciences (2000), 319(Use of Agriculturally Important Genes in Biotechnology), 19-25
CODEN: NASA22; ISSN: 1367-5666
PB IOS Press
DT Journal
LA English

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 29 AGRICOLA
 AN 2000:47157 AGRICOLA
 DN IND22052751
 TI Increased resistance to oxidative stress in transgenic tobacco plants overexpressing bacterial serine acetyltransferase.
 AU Blaszczyk, A.; Brodzik, R.; Sirog, A.
 CS Polish Academy of Sciences, Warsaw.
 AV DNAL (06/10/00)
 SO The Plant Journal : for cell and molecular biology, Oct 1999. Vol. 20, No. 2. p. 247-253
 Publisher: Oxford : Blackwell Sciences Ltd.
 ISSN: 0966-7418
 NTE Includes references
 CY England; United Kingdom
 DT Article
 FS Non-U.S. Imprint (other than FAO)
 LA English

L8 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1999:0849 & CAPLUS
 DN 129:87193
 TI Use of squifila attachment region (SAR) for improved plant transformation
 IN Horn, Michael E.; Hall, Gerald E., Jr.
 PA Mycogen Plant Science, Inc., USA
 SO PCT Int. Appl., 36 pp.
 CODEN: PEXM1
 DT Patent
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9341132	A1	19931009	WO 1998-US6109	19980327
W: AL, AO, EA, EB, EC, EF, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LB, LF, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, PR, SE, SI, SK, SL, TF, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, ME, RU, TJ, TN				
FW: CH, CN, KE, LS, MW, SL, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IF, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, CA, CN, ML, MR, NE, SN, TD, TG				
AN 9603710	A1	19981012	AU 1998-63716	19980327
EP 970230	A1	20000112	EP 1998-91434	19980327
F: AT, BE, CH, DE, EF, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9607844	A	20000222	BR 1998-7899	19980327
JP 201519782	T2	20011116	JP 1998-541854	19980327
PRAI US 1997-47813P	P	19970313		
US 1997-54413P	P	19970731		
WO 1998-US6109	W	19980327		

L8 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1999:167861 CAPLUS
 DN 131:140773
 TI pBIN20: an improved binary vector for Agrobacterium-mediated transformation
 AU Hennegan, Kevin P.; Danna, Kathleen J.
 CS Department of Molecular, Cellular, and Developmental Biology, University of Colorado, Boulder, CO, 80309-0347, USA
 SO Plant Molecular Biology Reporter (1998), 16(2), 129-131
 CODEN: PNERD4; ISSN: 0735-3249
 FB Kluwer Academic Publishers

DT Journal
LA English
FAN.CNT 3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

LE ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1997:517463 CAPLUS
DN 127:142464
TI Cloning of raspberry drul gene and use of its promoter for
tissue/stage-specific gene expression in transgenic plants
IN Kellogg, Jill Anne; Bestwick, Richard Keith
PA Agritope, Inc., USA; Kellogg, Jill Anne; Bestwick, Richard Keith
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9727312	A1	19970731	WO 1997-US1443	19970127
W:	AL, AM, AT, AU, AC, BA, BB, BC, BE, BY, CA, CH, CN, CR, DE, DK, EE, EG, FI, GB, GE, HU, IL, IS, JE, KE, KG, KP, KR, LC, LK, LR, LU, LT, LV, LY, MD, MG, MK, MN, MW, MX, NO, NZ, PE, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TN, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, BG, KZ, NL, RU, TJ, TM			
FX:	HE, LI, MW, SD, SE, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BU, CF, CG, CI, CM, GA, GN, ML, HE, NE, SN, TD, TG			
US 5183305	A	19960731	US 1996-591936	19960129
CA 2248969	AA	19970731	CA 1997-LF43969	19970127
AU 9714435	A1	19970830	AU 1997-1 456	19970127
AC 712461	B2	19961104		
EP 877411	A1	19961118	EP 1997-304371	19970127
F:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 200 508848	TL	20000424	JP 1997-527109	19970127
US 5924201	A	19990727	US 1998-1 1573	19980708
PRAI US 1996-592536		19960129		
WO 1997-US1443		19970127		

L8 ANSWER 16 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
3

AN 1993:75196 BIOSIS
DN PREV199500078396
TI pBDEKS: A flexible series of binary vectors for Agrobacterium-mediated
plant transformation.
AU McCormac, Alex C.; Elliott, Malcolm C.; Chen, Long-Pong (1)
CS (1) Norman Borlaug Inst. Plant Sci. Res., De Montfort Univ., Scraftoft,
Leicester LE1 9SU UK
SO Molecular Biotechnology, (Dec., 1997 Vol. 3, No. 3, pp. 199-213.
ISSN: 1473-6085.
DT Article
LA English

LE ANSWER 17 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1997:517463 CAPLUS
DN 126:81639
TI Cloning and sequence of the maize gene for 5C9 protein and its use for
insect control
IN Fox, Timothy W.; Garnaat, Carl W.; Meyer, Terry E.
PA Pioneer Hi-Bred International, Inc., USA
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9637615	A1	19961128	WO 1996-US764	19960924
	W:	AL, AM, AT, AU, AE, BF, BG, BR, BY, CA, CH, CN, CU, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LG, LT, LU, LV, MD, MG, MN, MU, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, SL, SN, SR, SS, ST, SV, SZ, TH, TJ, TM, TR, TT, UA, UG, UZ, VC, VE, YU, YU, ZA, ZM, ZW			
	FW:	KE, LS, MW, SD, SE, US, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, MI			
	US 5824961	A	19981120	US 1995-449986	19950525
	CA 2221972	AA	19961128	CA 1996-2211972	19960526
	AU 9368791	A1	19961121	AU 1996-58791	19960524
	US 5842662	A	19990116	US 1996-756355	19961126
PRAI	US 1995-449986		19950525		
	WO 1996-037764		19960924		

L8 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1996:046819 CAPLUS

EN 121:184602

TI Coat protein genes of cucumber mosaic virus for the preparation of virus-resistant plants

IN Boeshore, Maury L.; McManis, J. Russell; Tricoli, David M.; Reynolds, Joan E.; Carney, Kim J.

PA Agris Seed Company, USA

SO PCT Int. Appl., 80 pp.

COLEN: EIMXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9637615	A1	19960711	WO 1995-US7234	19950607
	W:	AM, AT, AU, BB, BG, BF, BY, CA, CH, CN, CU, DE, DK, EE, ES, FI, FR, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, SL, SN, SR, SS, ST, SV, SZ, TH, TJ, TM, TR, TT, UA, UG, UZ, VC, VE, YU, YU, ZA, ZM, ZW			
	FW:	KE, LS, MW, SD, SE, US, AT, BE, CH, DE, DK, ES, FR, FI, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, MI, MR, NE, SN, TL, TG			
	AU 6821657	A1	19960924	AU 1995-27637	19950607
	AU 706887	B2	19960924		
	EP 401734	A1	19961121	EP 1995-922996	19950607
	F:	BE, DE, ES, FR, GB, IT, NL			
	US 5827661	A	19971103	US 1997-875233	19970929
	US 6142665	B1	19990119	US 2000-614567	20000714
PRAI	US 1994-967789	A2	19941120		
	WO 1995-US7234	W	19950607		
	US 1997-875233	A3	19970929		

L8 ANSWER 19 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
4

AN 1996:331947 BIOSIS

EN PRFV199639054303

TI Analysis of octopine left border-directed DNA transfer from Agrobacterium to plants.

AJ Ramanathan, Vai; Veluthambi, K. (1)

CS (1) Dep. Plant Biotechnol., Sch. Biotechnol., Madurai Kamaraj Univ., Madurai 625 021 India

SO Journal of Biosciences (Bangalore), (1996) Vol. 21, No. 1, pp. 45-56.
ISSN: 0250-5991.

DT Article

LA English

L8 ANSWER 20 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
5
AN 1995:495039 BIOSIS
DN PRFV1995495039
TI High-level production and long-term storage of engineered antibodies in
transgenic tobacco seeds.
AU Fiedler, Ulrike; Conrad, Udo (1)
CU (1) Inst. Pflanzen-genetik Kulturpflanzenforschung, Corrensstr. 3, D-06466
Gatersleben, Germany
SO Bio-Technology (New York), (1995) Vol. 13, No. 10, pp. 1090-1093.
ISSN: 0730-222X.
DT Article
LA English

L8 ANSWER 21 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
6
AN 1995:548303 BIOSIS
DN PRFV1995548303
TI Expression of 2S seed storage protein gene of Brassica juncea in
transgenic tobacco plants under constitutive and seed-specific promoters.
AU Gnash, Rudip K.; Dasgupta, Jaydip; Maiti, Indu B.; Hunt, Arthur G.;
Mandal, Radha K. (1)
CU (1) Dep. Biochem., Cent. Plant Mol. Biol., Bose Inst., Calcutta 700 054
India
SO Journal of Plant Biochemistry and Biotechnology, (1995) Vol. 4, No. 1, pp.
1-4.
DT Article
LA English

L8 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1992:406853 CAPLUS
DN 117:66833
TI Modification of patterns of sugar metabolism in plants with an
heterologous enzyme
IN Sonnenwald, Uwe; Willmitzer, Lothar
PA Institut fuer Genbiologische Forschung Berlin GmbH, Germany
SO Eur. Pat. Appl., 15 pp.
CODEN: FPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 438044	A1	19920513	EP 1991-250301	19911104
	EP 438044	A3	19920723		
	EP 438044	B1	20011010		
	E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DE 4136756	A1	19920514	DE 1990-4035756	19901108
	AU 9187321	A1	19920514	AU 1991-87021	19911104
	AU 658209	B2	199311208		
	EP 1114866	A2	20010711	EP 2001-106521	19911104
	EP 1114866	A3	20011128		
	E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 200101	E	20011115	AT 1991-250301	19911104
	CA 2089150	AA	19920119	CA 1991-2055150	19911107
	HU 00774	A2	19921023	HU 1991-3508	19911107
	HU 219131	B	19931130		
	JP 85036971	A2	19830917	JP 1991-291065	19911107
	US 5492820	A	19960220	US 1993-147007	19931102
PRAI	DE 1990-4035756	A	19901108		
	EP 1991-250301	A3	19911104		
	US 1991-788921	B1	19911107		

DUPLICATE 7

L8 ANSWER 24 OF 28 AGRICOLA
 AN 93:01238 AGRICOLA
 DN IND93048563
 TI Resistance to heterologous isolates of tomato spotted wilt virus in transgenic tobacco expressing its nucleocapsid protein gene.
 AU Pang, S.H.; Nagpala, P.; Wang, H.; Slightom, J.L.; Goncalves, L.
 AV DNAL (464.8 P56)
 SO Phytopathology, Oct 1992, Vol. 82, No. 10, p. 1223-1229
 Publisher: St. Paul, Minn.: American Phytopathological Society.
 CODEN: PHYTAJ; ISSN: 0031-944X
 NTE Includes references.
 DT Article
 ES U.S. Imports not USDA, Experiment or Extension
 LA English

L8 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1990:40125 CAPLUS
 DN 113:98120
 TI Expression cassette for plant
 AU Slightom, Jerry L.
 FA Uojchi, Ill., USA
 SO PCT Int. Appl., 39 pp.
 CODEN: PEXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9001185	A1	19900830Y	WO 1989-US3095	19890720
	W: AU, DK, FI, HU, JP, FR, NO, SU, US				
	EA: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU	3985004	A1	19900813	AU 1989-39804	19890720
AU	634441	B2	19900813		
EP	420473	A1	19910825	EP 1989-908579	19890720
EP	420473	B1	19910111		
	E: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP	0410151	T2	19900813	JP 1989-50115	19890720
AT	118596	E	19900813	AT 1989-908579	19890720
EP	698166	A1	19900824	EP 1989-111128	19890720
	E: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
EP	698167	A1	19900825	EP 1989-111129	19890720
	E: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT	101173	E	19891113	AT 1989-90868	19890720
CA	1940118	A1	19900813	CA 1989-90866	19890727
CA	1940117	A1	19900817	CA 1989-907036	19890731
CN	1044226	A	19900816	CN 1989-106449	19890819
CN	1044227	A	19900821	CN 1989-106450	19890819
DK	910121	A	19910119	DK 1991-281	19910219
PRAI	US 1989-334412		19890819		
	US 1989-333536		19890814		
	US 1989-368710		19890819		
	EP 1989-908579		19890720		
	EP 1989-908758		19890720		
	WO 1989-US3095		19890720		

L8 ANSWER 25 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 ?
 AN 1990:075892 BIOSIS
 DN BA90:02573
 TI THE P15 PLASMIDS CASSETTES UTILIZING CAMV SEQUENCES FOR EXPRESSION OF FOREIGN GENES IN PLANTS.
 AU TIMMERMAN M C P; MALIGA P; VIEIRA J; MESSING J
 OS WAKSMAN INST., RUTGERS, STATE UNIVERSITY NEW JERSEY, PISCATAWAY, NJ
 08855-0759.

SO J BIOTECHNOL, (1990) 14 (3-4), 333-344.
 CODEN: JBIFD4. ISSN: 0168-1656.
 FT BA; OLD
 LA English

L8 ANSWER 26 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 9
 AN 1989:239573 BIOSIS
 LN BASE:11877
 TI EXPRESSION OF A POTYVIRUS NON-STRUCTURAL PROTEIN IN TRANSGENIC TOBACCO.
 AU GRAYBETH D; HELLMANN M M; SHAW J G; PROADS P E; HUNT A G
 CS DEP. OF AGRONOMY, W-212, ANCH, UNIV. OF KY., LEXINGTON, KY. 40546-0001.
 SO BIOCHEM BIOPHYS RES COMMUN, (1989) 160 (2), 425-432.
 CODEN: BBRC99. ISSN: 0006-291X.
 FS BA; OLD
 LA English

L8 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1988:160721 CAPLUS
 DN 108:160721
 TI **Transformation** and foreign gene expression with woody species
 IN Fillard, Joanne; Comai, Luca
 PA Calgene, Inc., USA
 SO Eur. Pat. Appl., 9 pp.
 CODEN: EPKXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP	EP 222164	A1	19870701	EP 1986-308131	19861030
	EP 222164	A3	19890617		
	B: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 4738811	A	19890113	US 1986-832928	19860224
	FI 8604307	A	19870515	FI 1986-4331	19861024
	AU 1988121	A1	19870521	AU 1986-65122	19861113
	AU 581919	B2	19900614		
PRAI	US 1981-708050		19851114		
	US 1986-832928		19860224		

L8 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1987:150712 CAPLUS
 DN 106:150712
 TI Comparison of cauliflower mosaic virus 35S and neopline synthase promoters in transgenic plants
 AU Sanders, P. R.; Winter, J. A.; Barnason, A. R.; Rogers, S. G.; Fraley, R. T.
 CS Plant Mol. Biol. Group, Monsanto Co., St. Louis, MO, 63176, USA
 SO Nucleic Acids Res. (1987), 15(4), 1543-58
 CODEN: NARFAD; ISSN: 0305-1048
 DT Journal
 LA English

L8 ANSWER 29 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 10
 AN 1987:461655 BIOSIS
 DN BA84:108095
 TI FACTORS AFFECTING THE LEVEL OF KANAMYCIN RESISTANCE IN TRANSFORMED SUNFLOWER CELLS.
 AU NUTTER P; EVERETT N; PIERCE D; PANGANIBAN L; OKUBARA P; LACHMANSINGH R; MASCARENHAS D; WELCH H; METTLER I; ET AL
 CS DEP. AGRIC. BIOTECHNOL., STAUFFER CHEM. CO., RICHMOND, CALIF. 94804.
 SO PLANT PHYSIOL (BETHESDA), (1987) 84 (4), 1185-1192.
 CODEN: PLPHAY. ISSN: 0032-0889.

BA: 011
LA: English

=> s plant(w)expression(w)cassette and transform? and pinus
L9 0 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM? AND PINUS

=> s plant(w)expression(w)cassette and transform? and populus
L10 0 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM? AND POPULUS

=> s plant(w)transform? and camv and nos and pbin and npt and binary(w)vector
L11 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND BINARY
W) VECTOR

	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	96.26	137.48

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=> s plant(w)transform? and camv and nos and pbin and npt and binary(w)vector
L12 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND BINARY
(W) VECTOR

=> s plant(w)transform? and camv and nos and pbin and phosphotransferase
L13 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND PHOSPHOTRANSFERASE

=> s plant(w)transform? and camv and nos and phosphotransferase
L14 3 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PHOSPHOTRANSFERASE

=> d 114 1-3

L14 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:41036 BIOSIS
DN PREV200100041036
TI Direct transformation and plant regeneration of the haploid liverwort
Marchantia polymorpha L.
AU Takenaka, Mizuki; Yamacka, Shohei; Hanajiri, Tsutomu; Shimizu-Ueda, Yuu;
Yamato, Katsuyuki T.; Fukuzawa, Hideya; Ooyama, Kanji (1)
CS (1) Laboratory of Plant Molecular Biology, Division of Integrated Life
Science, Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502;
kohyama@lif.kyoto-u.ac.jp Japan
SO Transgenic Research, (June, 2000) Vol. 9, No. 3, pp. 179-185. print.
ISSN: 0962-8819.
BT Article
LA English
SL English

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2001:59813c CAPLUS
DN 1991:17643c

TI Prediction of recombinant rotavirus structural proteins by transformed
 plant cell, and edible vaccine composition including the rotavirus antigen
 IN Kim, Won-yong; Chung, In-sik; Lee, Youn-hyung; Kim, Hong-joong
 PA S. Korea
 SO PCT Int. Appl., 55 pp.
 COLEN: P11X22
 DT Patent
 LA English
 RE.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001-01970	A1	20010816	WO 2001-KR206	20010212
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,			
		CS, CU, CZ, DE, DF, DM, DZ, EE, ES, FI, GB, GD, GE, GR, GM, HP,			
		HN, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU,			
		LV, MA, ME, MG, MF, MN, MW, MX, NC, NZ, PL, PT, RO, RU, SD,			
		SE, SG, SI			
	PW:	GH, GM, HE, LS, MW, ME, SD, SL, SS, TT, UG, ZW, AT, BE, CH, CY,			
		DE, DK, ES, FI, FR, GB, GR, HE, IT, LU, MC, NL, PT, SE, TR, BF,			
		EJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRAI	KR 2000-6094	A	20000212		
RE.CNT	6	THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:728957 CAPLUS
 DN 134:261674
 TI Direct transformation and plant regeneration of the haploid liverwort
 Marchantia polymorpha L.
 AU Takenaka, Mizuki; Yamacka, Shohei; Hanajiri, Tsutomu; Shimizu-Ueda, Yuu;
 Yamato, Katsuyuki T.; Fukuzawa, Hideya; Iiyama, Kanji
 CS Laboratory of Plant Molecular Biology, Division of Integrated Life
 Science, Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502,
 Japan
 SO Transgenic Research (2000), 9(5), 179-185
 CODEN: TRSEBS; ISSN: 0962-8819
 PB Kluwer Academic Publishers
 DT Journal
 LA English
 RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s agrobacterium and camv and nos and neomycin
 L15 1 AGROBACTERIUM AND CAMV AND NOS AND NEOMYCIN

=> d 115 1-8

L15 ANSWER 1 OF 8 AGRICOLA
 AN 1999:66174 AGRICOLA
 EN INE 2000016
 TI Integration, expression and inheritance of two linked T-DNA marker genes
 in transgenic lettuce.
 AU McCabe, M.S.; Mohapatra, U.B.; Debnath, S.C.; Power, J.B.; Davey, M.R.
 CS University of Nottingham, University Park, Nottingham, UK.
 AV DNAL (QF981.4.M63)
 SO Molecular breeding : new strategies in plant improvement, 1999. Vol. 5,
 No. 4. p. 329-344
 Publisher: Dordrecht ; Boston : Kluwer Academic Publishers, c1995-
 CODEN: MOBRFL; ISSN: 1380-3743
 NTE Includes references
 CY Netherlands
 DT Article
 FS Non-U.S. Imprint other than FAO

LA English

L11 ANSWER 2 OF 8 AGRICOLA
AN 94:76888 AGRICOLA
DN IND20418493
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens.
AU Choi, B.S.; Soh, W.Y.; Kim, Y.S.; Yoo, O.J.; Liu, J.R.
AV DNAL (QK723.P54)
SO Plant cell reports, 1994. Vol. 13, No. 6, p. 344-348. 1
Publisher: Berlin, W. Ger. : Springer International.
CODEN: PCRPD3; ISSN: 0721-7714
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L13 ANSWER 3 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:258973 BIOSIS
DN PREV1994191260973
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens.
AU Choi, B.S.; Soh, W.Y.; Kim, Y.S.; Yoo, O.J.; Liu, J.R.
CS (1) Plant Cell Biol. Lab., Genetic Eng. Res. Inst., KIST, Taejeon Korea
SO Plant Cell Reports, (1994) Vol. 13, No. 6, pp. 344-348.
ISSN: 0721-7714.
DT Article
LA English

L15 ANSWER 4 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:189814 BIOSIS
DN PREV199419172814
TI Genetic transformation by **Agrobacterium tumefaciens** in the
interspecific hybrid *Helianthus annuus* X *Helianthus tuberosus*.
AU Pugliesi, Claudio; Biasini, Maria Grazia; Fambrini, Marco; Baroncelli,
Sergio (1
CS (1) Dep. Agricultural Plant Biology, Genetics Section, Via Matteotti 1/B,
I-56104 Pisa Italy
SO Plant Science (Limerick), (1993) Vol. 98, No. 1-2, pp. 105-115.
ISSN: 0168-9452.
DT Article
LA English

L16 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 2001:598135 CAPLUS
DN 135:176438
TI Production of recombinant rotavirus structural proteins by transformed
plant cell, and edible vaccine composition including the rotavirus antigen
IN Kim, Won-yong; Chung, In-sik; Lee, Youn-hyung; Kim, Hong-joong
PA S. Korea
SO ECT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001013070	A1	20010816	WO 2001-KR296	20010212
B: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
DE, DK, EE, ES, FI, GB, GR, HU, IE, IL, IN, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU,				
LV, MA, MD, ME, MG, MK, MN, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD,				
SE, SG, SI				

RW: GH, GM, KE, LS, MN, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IRAI KP 2000-0694 A 20000212
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1999:718113 CAPLUS
DN 132:25259
TI Genetically modified organisms in food-screening and specific detection by
polymerase chain reaction
AU Vollenhofer, Sabine; Burg, Kornel; Schmidt, Josef; Kroath, Hans
CS Austrian Research Centers Seibersdorf Biotechnology Unit, Seibersdorf,
A-2444, Austria
SO Journal of Agricultural and Food Chemistry (1999), 47(12), 5038-5043
CODEN: JAFCAU; ISSN: 0021-3561
PE American Chemical Society
DT Journal
LA English
REL.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1995:13918 CAPLUS
DN 123:73240
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens
AU Choi, Pil S.; Sch, Wong Y.; Kim, Youn S.; Yoo, Cok J.; Liu, Jang R.
CS Genet. Eng. Res. Inst., FIRST, Taejeon, S. Korea
SO Plant Cell Rep. (1994), 13(5), 344-3
CODEN: PLRBDI; ISSN: 0721-7714
DT Journal
LA English

L15 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1994:23718 CAPLUS
DN 120:23718-
TI Genetic transformation by **Agrobacterium tumefaciens** in the
interspecific hybrid *Helianthus annuus* .times. *Helianthus tuberosus*
AU Eugliesi, Claudio; Biasini, Maria Grazia; Fambrini, Marco; Baroncelli,
Sergio
CS Genet. Sect., Dep. Agric. Plant Biol., Pisa, I-56124, Italy
SO Plant Sci. (Limerick, Irel.) (1995), 93(1-2), 105-15
CODEN: PLSCB4; ISSN: 0168-9452
DT Journal
LA English

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SINCE FILE	TOTAL
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53.88	191.36

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SINCE FILE	TOTAL
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ENTRY SESSION
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=> s poin19 and agrobacterium and camv and nptII
L16 3 PRIN19 AND AGROBACTERIUM AND CAMV AND NPTII

=> d L16 1-3

L16 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2002:452631 CAPLUS
TI Transformation of Gerbera plants with tomato spotted wilt virus (TSWV)
nucleoprotein gene
AU Kerbin, M.; Podwyszynska, M.; Komarowska, B.; Wawrzyniczak, D.
CS Research Institute of Hortology and Floriculture, Skierniewice, 96-100,
Pol.
SO Acta Horticulturae (2002), 572(Proceedings of the Twentieth International
Eucarpia Symposium, Section Ornamentals, 2001), 149-157
CODEN: AHORAL; ISSN: 0567-7572
PB International Society for Horticultural Science
DT Journal
LA English

L16 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1999:015103 CAPLUS
DN 131:143146
TI Chitinase-transgenic lines of "Royal Gala" apple showing enhanced
resistance to apple scab
AU Wong, K.-W.; Harman, G. E.; Norelli, J. L.; Gustafson, H. L.; Aldwinckle,
H. S.
CS Department of Plant Pathology, Cornell University, Geneva, NY, 1446, USA
SO Acta Horticulturae (1998), 434(Eucarpia Symposium on Fruit Breeding and
Genetics, 1996), 595-597
CODEN: AHORAL; ISSN: 0567-7572
PB International Society for Horticultural Science
DT Journal
LA English
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE FE FORMAT

L16 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1998:373878 CAPLUS
DN 129:145382
TI Preparation of coat protein-containing binary vectors for use in
agrobacterium-mediated transformation
AU Wallis, Corrin V.; Boulton, Margaret L.
CS Department of Virus Research, John Innes Centre, Norwich, UK
SO Methods in Molecular Biology (Totowa, New Jersey) (1998), 81(Plant
Virology Protocols), 341-352
CODEN: MEMBID; ISSN: 1064-3743
PB Humana Press Inc.
DT Journal

LA English

=> FILE STNGUIDE
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
12.78	204.20

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=> file agricola biosis embase caplus
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.12	204.32

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=> d 112 1-2

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Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

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'1:dnone' IS NOT A VALID SEARCH STATUS KEYWORD

Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

ENTER SEARCH STATUS OPTION (NONE), STATUS, OR 1:y

'1:y' IS NOT A VALID SEARCH STATUS KEYWORD

Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

ENTER SEARCH STATUS OPTION (NONE), STATUS, OR 1:status

L12 2 SPA PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND
BINARY(W) VECTOR

=> d 116 1

L16 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 2002:452631 CAPLUS

TI Transformation of Gerbera plants with tomato spotted wilt virus (TSWV)
nucleoprotein gene

AU Korbin, M.; Podwyszynska, M.; Komorowska, B.; Wawrzyniczak, D.

CS Research Institute of Pomology and Floriculture, Skierniewice, 96-100,
Pol.

AD Acta Horticulturae (2002), 572/Proceedings of the Twentieth International
 Hortaria Symposium, Section Ornamentals, 2001, 149-157
 CODEN: AHOLA2; ISSN: 0967-8572
 PB International Society for Horticultural Science
 DT Journal
 LA English

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
	3.97	208.29
FULL ESTIMATED COST		

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-> file agricola biosis embase caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
	0.12	208.47
FULL ESTIMATED COST		

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=> s pbin19
 L17 123 #BIN19

=> s 117 and npt11
 L18 21 L17 AND NPT11

=> s 117 and neomycin
 L19 25 L17 AND NEOMYCIN

=> s 119 and camv
 L20 1 L19 AND CAMV

=> s 119 and 35s
 L21 1 L19 AND 35S

> d 121

L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 AN 1993:95261 CAPLUS
 DN 119:95261
 TI Factors influencing Agrobacterium tumefaciens mediated transformation and
 expression of kanamycin resistance in pickling cucumber
 AU Sarmiento, G. G.; Alpert, K.; Tang, F. A.; Punja, Z. K.
 CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA
 SO Plant Cell, Tissue Organ Cult. (1992), 31(3), 185-93

CODEN: PTCEDJ; ISSN: 0167-6857
BT Journal
LA English

FILE STINGUIDE
COST IN U.S. DOLLARS
FILE ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
11.71	220.12

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LAST RELEASED: Jun 14, 2002 (70920614/UP).

=> d 119 1-11
YOU HAVE REQUESTED DATA FROM FILE 'AGRICOLA, BIOSIS, EMBASE, CAPLUS' - CONTINUE?
(Y/N):y

L19 ANSWER 1 OF 12 AGRICOLA
AN 2000:22196 AGRICOLA
DN IND22086164
TI A novel binary vector series for plant transformation.
AU Xiang, C.; Hsu, P.; Lutziger, L.; Wang, K.; Oliver, D.J.
CS Iowa State University, Ames, IA.
AV DNA (1K10.P80)
SO Plant molecular biology, July 1999. Vol. 40, No. 4. p. 711-717
Publisher: Dordrecht : Flower Academic Publishers.
CODEN: ENBIB2; ISSN: 0167-4412
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L19 ANSWER 2 OF 22 AGRICOLA
AN 1998:25710 AGRICOLA
DN IND23703264
TI Agrobacterium-mediated transformation of Artemisia absinthium L.
(wormwood) and production of secondary metabolites.
AU Nin, S.; Benrici, A.; Roselli, G.; Mariotti, D.; Schiff, S.; Magherini, R.
SO Plant cell reports, July 1997. Vol. 16, No. 10. p. 725-730
Publisher: Berlin, W. Ger. : Springer International.
CODEN: PCRPD8; ISSN: 0721-2714
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L19 ANSWER 3 OF 22 AGRICOLA
AN 96:2046 AGRICOLA
DN IND20491089
TI pPINPLUS: an improved plant transformation vector based on pBIN19
AU Engelen, F.A. van; Molthoff, J.W.; Conner, A.J.; Nap, J.P.; Pereira, A.;
Stiekema, W.J.
CS CPRO-DLP, Wageningen, The Netherlands.
AV DNA (20442.6.T74)

J1 Transgenic research, July 1996. Vol. 4, No. 4. p. 288-290
 Publisher: London, UK : Chapman & Hall, 1991-
 CODEN: TRCHES; ISSN: 0962-1064
 NTE Includes references
 CY England; United Kingdom
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 4 OF 22 AGRICOLA
 AN 95:51913 AGRICOLA
 DN IND2048:785
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of tomato spotted wilt virus.
 AU Yepes, J.M.; Mittak, V.; Pang, S.Z.; Gonsalves, C.; Slightom, J.L.; Gonsalves, D.
 CS Cornell University, Geneva, NY.
 AV DNAL QK725.P54)
 SO Plant cell reports, 1995. Vol. 14, No. 11. p. 694-698
 Publisher: Berlin, W. Ger. : Springer International.
 CODEN: PCRPDH; ISSN: 0721-7714
 NTE Includes references
 CY Germany
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 5 OF 22 AGRICOLA
 AN 93:27362 AGRICOLA
 DN INC93:13741
 TI Modified binary plant transformation vectors with the wild-type gene encoding NPTII.
 AU Datla, R.S.S.; Hammerlinal, J.K.; Panchuk, B.; Pelcher, L.E.; Keller, W.
 CS National Research Council of Canada, Saskatoon, Sask., Canada
 AV DNAL QH442.A134)
 SO Gene, 1992. Vol. 122, No. 2. p. 383-384
 Publisher: Amsterdam : Elsevier Science Publishers.
 CODEN: GENSD6; ISSN: 0378-1119
 NTE Includes references.
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 6 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1997:5:2104 BIOSIS
 DN PFEV19:799891307
 TI Agrobacterium-mediated transformation of Artemisia absinthium L. (wormwood) and production of secondary metabolites.
 AU Nin, S. (1); Bennici, A.; Roselli, G.; Mariotti, D.; Schiff, S.; Magherani, F.
 CS Dip. Ortoflorofrutticoltura, Univ. Firenze, Via Donizetti 6, I-50144 Firenze- Italy
 SO Plant Cell Reports, (1997) Vol. 16, No. 10, pp. 725-730.
 ISSN: 0721-7714.
 DT Article
 LA English

L19 ANSWER 7 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1996:123512 BIOSIS
 DN EPEN1996:26695677
 TI Ti plasmid-mediated transformation of tobacco with C-4-PEPCase cDNA from tea plants.
 AU Deng Long-Ying, Long Jun; Wang Zhao-Wing; Shi Jiao-Nai
 CS Shanghai Inst. Plant Physiology, Chinese Academy Sciences, Shanghai 200032

China
 SO Acta Phytophysiological Sinica, (1995) Vol. 21, No. 3, pp. 281-288.
 ISSN: 0137-4829.
 DT Article
 LA Chinese
 SL Chinese; English

L19 ANSWER 1 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:45342 BIOSIS
 DN PREV19959846342
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of tomato spotted wilt virus.
 AU Yegees, Luz Marcela (1); Mittak, Veronica; Pang, Shenk-Zhi; Gonsalves, Carol; Slightom, Jerry L.; Gonsalves, Dennis
 CS (1) Dep. Plant Pathol., Cornell Univ., New York State Agric. Exp. Stn., Geneva, NY 14456 USA
 SO Plant Cell Reports, (1995) Vol. 14, No. 11, pp. 694-698.
 ISSN: 0721-7714.
 DT Article
 LA English

L19 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:17857 BIOSIS
 DN PREV199497080857
 TI Screening of transgenic plants using polymerase chain reaction.
 AU Bagdasarian, L.; Shul'ga, O. A.; Skryabin, K. B.
 CS Cent. "Bioeng.", Acad. Sci. Russ., Moscow 11/984 Russia
 SO Molekulyarnaya Biologiya (Moscow), (1993) Vol. 27, No. 4, pp. 947-951.
 ISSN: 0026-8984.
 DT Article
 LA Russian
 SL Russian; English

L19 ANSWER 10 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1993:144693 BIOSIS
 DN PREV199395085743
 TI Modified binary plant transformation vectors with the wild-type gene encoding NPTII.
 AU Datla, Fajun S. S. (1); Hammerlindl, Joe K.; Panchuk, Barry; Pelcher, Lawrence E.; Keller, Wilf
 CS (1) Plant Biotechnol. Inst., 110 Gymnasium Road, Saskatoon, Sask. S7N 6W9 Canada
 SO Gene (Amsterdam), (1992) Vol. 122, No. 2, pp. 383-384.
 ISSN: 0378-1119.
 DT Article
 LA English

=> d L19 1-10 ab
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 (Y/N):y

L19 ANSWER 1 OF 22 AGRICOLA
 AB A streamlined mini binary vector was constructed that is less than 1/2 the size of the **pBIN19** backbone (3.5 kb). This was accomplished by eliminating over 5 kb of non-T-DNA sequences from the **pBIN19** vector. The vector still retains all the essential elements required for a binary vector. These include a RK2 replication origin, the nptIII gene conferring kanamycin resistance in bacteria, both the right and left T-DNA borders, and a multiple cloning site (MCS) in between the T-DNA borders to facilitate cloning. Due to the reduced size, more unique restriction sites are available in the MCS, thus allowing more versatile cloning. Since the

that region was not included, it is not possible to mobilize this binary vector into *Agrobacterium* by triparental mating. This problem can be easily resolved by direct transformation. The mini binary vector has been demonstrated to successfully transform *Arabidopsis* plants. Based on this mini binary vector, a series of binary vectors were constructed for plant transformation.

L19 ANSWER 2 OF 12 AGRICOLA

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1855 and LBA 9402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1855 and **pBin19**, while polymerase chain reaction analysis indicated the presence of the **neomycin phosphotransferase** gene in the hairy root genome. Subcultured transformed root lines grew well in selective B5 agar-solidified medium containing kanamycin or rifampicin and without hormones. Shake-flask experiments with fast-growing root lines showed that 40 g l⁻¹ was the best sucrose concentration for biomass production, yielding a 400-fold increase in dry weight after 23 days of culture. Great differences were found in the profiles of the essential oils isolated from normal and hairy roots. Gas chromatography/mass spectrometry analysis showed the oil produced by transformed cultures to be a mixture of 50 compounds with only one major component representing 17% of the oil content.

L19 ANSWER 3 OF 12 AGRICOLA

L19 ANSWER 4 OF 12 AGRICOLA

AB In vitro regeneration and diolistic transformation procedures were developed for several commercial chrysanthemum (*Chrysanthemum grandiflora* Tzvelev, syn. *Chrysanthemum morifolium* Ramat. cultivars using leaf and stem explants. Studies on the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Edison, and Fana, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid **pBIN19** containing the nucleocapsid (N) gene of tobacco spotted wilt virus (TSWV) and the marker gene **neomycin phosphotransferase** (NPT II). PCR analysis of 12 putative transgenic plants selected on kanamycin indicated that the majority of the lines (83%) were transformed and contained both genes (21%). However, some transgenic lines contained only one of the genes either the NPT II (16%) or the TSWV (N) gene (14%). Southern blot analysis on selected transgenic lines confirmed the integration of the TSWV (N) gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

L19 ANSWER 5 OF 12 AGRICOLA

AB The defective gene encoding **neomycin phosphotransferase** (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the wt NPTII enzyme activity.

L19 ANSWER 6 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1855 and LBA 9402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from

control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1855 and **pBin19**, while polymerase chain reaction analysis indicated the presence of the **neomycin** phosphotransferase gene in the hairy root genome. Subcultured transformed root lines grew well in selective B5 agar-solidified medium containing kanamycin or rifampicin and without hormones. Scale-flask experiments with fast-growing root lines showed that 40 μ g/l was the best sucrose concentration for biomass production, yielding a 40-fold increase in dry weight after 25 days of culture. Great differences were found in the profile of the essential oils isolated from normal and hairy roots. Gas chromatograph/mass spectrometry analysis showed the oil produced by transformed cultures to be a mixture of 50 compounds with only one major component representing 2% of the oil content.

- L19 ANSWER 7 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB Phosphoenolpyruvate carboxylase (EC 4.1.1.31) is a key enzyme in C-4-dicarboxylic assimilation, and imposes a wealth of advantage to the photosynthetic properties of C-4 plants. The genetic transfer of C-4-photosynthetic system, especially PEPCase, into C-3 plant became a potential approach to improve the photosynthetic rate of C-3 plants. In this paper, a C-4-PEPCase cDNA from Zea mays was transferred into a C-3 plant tobacco, and a transgenic plant was constructed for further studies on the expression of C-4-PEPCase gene in C-3 plant as well as the modulation of photosynthetic system in C-3 plants. A 2.1 kb fragment of C-4-PEPCase cDNA derived from a maize PEPCase cDNA clone pPEP3085 was subcloned into binary vector **pBin19**, and transconjugated into Agrobacterium tumefaciens retaining vir helper plasmid LBA4404 by means of 'triparental mating'. Then the engineering plasmid pPEP32 harbouring C-4-PEPCase cDNA was transformed into the leaf disc of tobacco by co-culture with transconjugated A. tumefaciens. Antibiotic screening yielded a batch of transformants resistant to kanamycin and the regenerated transgenic tobacco was obtained as shown. The assay for **neomycin** phosphotransferase II (NPT II) showed a frequency of 80%, implying that the C-4-PEPCase cDNA neighbouring the NPT II gene might have been transferred into tobacco cell. Southern blotting analysis provided further evidence that the PEPCase cDNA was stably integrated into the tobacco genome, promising the possibility of getting substantial expression of C-4-PEPCase gene in C-3 plants.

- L19 ANSWER 8 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB In vitro regeneration and biolistic transformation procedures were developed for several commercial chrysanthemum Dendranthema grandiflora Cavendish, syn. Chrysanthemum morifolium Ramet. cultivars using leaf and stem explants. Studies in the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Indigo, and Tara, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid **pBIN19** containing the nuclear (N) gene of tomato spotted wilt virus (TSWV) and the marker gene **neomycin** phosphotransferase (NPT II). PCR analysis of putative transgenic plants selected on kanamycin indicated that the majority of the lines (89%) were transformed and contained both genes. However, some transgenic lines contained only one of the genes: either the NPT II (15%) or the TSWV (14%). Southern blot analysis of selected transgenic lines confirmed the integration of the TSWV-N gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

- L19 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB A test system for selecting transgenic plants based on polymerase chain reaction (PCR), has been proposed. It is applicable to primary screening of transgenic plants obtained by cocultivation with *Agrobacterium* which contains any vector carrying **neomycin** phosphotransferase genes from transposon Tn5 and *Streptococcus* (for example **pBIN19**). These genes confer kanamycin resistance in plants and bacteria respectively. The absence of strong homology between these two genes allows one to perform two PCRs in the same reaction mixture. Thus simultaneous selection of transgenic plants and test for contamination with *Agrobacterium* are possible. We have also proposed a simple procedure for preparing small samples of plant DNA suitable for PCR detection.

L19 ANSWER 19 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The defective gene encoding **neomycin** phosphotransferase (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the wt NPTII enzyme activity.

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L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

AB Cucumber (*Cucumis sativus* L.) petiole and leaf segments of two pickling genotypes were transformed with *A. tumefaciens* strain IBA 4404, an octopine Ti-plasmid deletion mutant that is avirulent (disarmed plasmid), but to which were added T-DNA inserts on binary plasmids (**pBIN 19**, ca. 10 kb, and **pBIN 743**, ca. 23 kb). Expression of **neomycin** phosphotransferase (NPT II) encoding resistance to the aminoglycoside kanamycin was used as a selectable marker. Factors which influenced the frequency of callus development in medium contg. kanamycin (75 mg l⁻¹) were explant size, bacterial concn. and length of exposure, cocultivation period, and presence of acetosyringone. The optimal procedure involved exposing segments of petiole (4-6 mm) or leaf (0.5 cm²) segments to a bacterial suspension (10⁸ cells mL⁻¹) contg. 10 .mu.M acetosyringone for 5 min, followed by a 48 h cocultivation period on a tobacco feeder layer. Explants were placed on M3 medium contg. 100 mg l⁻¹ carbenicillin, 75 mg l⁻¹ kanamycin, and NAA/BA (5.0/2.5 .mu.M) or 2,4-D/BA (5.0/5.0 .mu.M) and subcultured twice, each after a 1-3 wk period, onto fresh media. The overall frequency of transformed callus was 20-50%; the frequency of plantlet regeneration from transformed callus was 3-15%. Twenty-one out of 23 individual plants recovered from two genotypes of pickling cucumber were NPT II pos. (transformation frequency of 9%). Copy no. of the NPT II

gene insert (35S-NPT II-3' fragment, ca. 2.2 kb) in 3 transformed plants was estd. at 10 per haploid genome, indicative of multiple insertions within the cucumber genome. Multimers of the gene (visible as 4.4 and 6.6 kb fragments in Southern anal.) were detected in one plant, suggestive of tandem duplications or repeats. Progeny from a cross between this transformed plant and a nontransformed control showed segregation for the NPT II gene in dot-blot assays; at least 24 plants out of 32 were kanamycin pos. Copy no. in the progeny was variable, and ranged 2-10.

121

121 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

AN 1993:95261 CAPLUS

DN 119:95261

TI Factors influencing Agrobacterium tumefaciens mediated transformation and expression of kanamycin resistance in pickling cucumber

AU Sarmiento, G. G.; Alpert, K.; Tang, F. A.; Punja, A. K.

CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA

SO Plant Cell, Tissue Organ Cult. (1992), 31(3), 185-93

CODEN: PICEED; ISSN: 0167-6367

BT Journal

LA English

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119 ANSWER 11 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Two different Ti-binary vectors in Agrobacterium tumefaciens have been used to produce viable transgenic strawberry plants. Fertile strawberry plants with a normal phenotype were regenerated after transformation with pBIN6, which carries genes for neomycin synthase (nos) and **neomycin** phosphotransferase (nptII) (conferring kanamycin resistance). The transfer and expression of the two genes was confirmed by Southern blot analysis, the detection of neomycin synthase (NOS) activity in vegetative and reproductive tissues and rooting in vitro in the presence of kanamycin. The nos gene continued to be expressed in glasshouse-grown plants many months after removal from in vitro growth conditions. After selfing the R0 plants nos segregated in the R1 progeny according to a 3:1 Mendelian ratio. In in vitro germinated seedlings there was complete correlation between the presence of neomycin synthase activity and the ability of leaf segments to produce callus on a medium containing kanamycin. Transgenic

shoots that exhibited an abnormal phenotype associated with cytokinin overproduction were produced when plants were transformed with pSC1, a derivative of **pBIN19** carrying both the *nptII* gene and the *ipt* gene (encoding the enzyme isopentenyltransferase). Shoots of these plants grew on hormone-free medium, could not be induced to root and their growth was unaffected by the presence of 50 $\mu\text{m.g/ml}$ kanamycin in hormone-free media.

L19 ANSWER 13 OF 22 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AB A test system for selecting transgenic plants based on polymerase chain reaction (PCR) has been proposed. It is applicable to primary screening of transgenic plants obtained by cocultivation with *Agrobacterium* which contains any vector carrying **neomycin phosphotransferase** genes from transposon *Tn5* and *Streptococcus* (for example **pBIN19**). These genes confer kanamycin resistance in plants and bacteria respectively. The absence of strong homology between these two genes allows one to perform two PCRs in the same reaction mixture. Thus simultaneous selection of transgenic plants and test for contamination with *Agrobacterium* are possible. We have also proposed a simple procedure for preparing small samples of plant DNA suitable for PCR detection.

L19 ANSWER 14 OF 22 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AB The *neomycin* gene encoding **neomycin phosphotransferase** (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (*wt*) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the *wt* NPTII enzyme activity.

L19 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB *Agrobacterium tumefaciens* and biolistic transformation procedures were developed for *Polaris* and *Golden Polaris*, two important com. chrysanthemum *Dendranthema grandiflora* Tavelay (syn. *Chrysanthemum morifolium* Ramat.) cultivars. The disarmed *A. tumefaciens* strains LBA3404, C58s2707 and EHA105 contg. the binary plasmids **pBIN19** or **pGA482G** were used for transformation. Both plasmids contained within the T-DNA borders of the nucleocapsid (*N*) protein genes of either tomato spotted wilt (TSWV), Impatiens necrotic spot (INSV), or groundnut ring spot (GRSV) tospoviruses, and the marker gene **neomycin phosphotransferase** (NPT II); **pGA482G** contained also the *ss-glucuronidase* (*GUS*) gene. Transgenic plants were recovered using leaf and stem explants, and using a step-wise kanamycin selection procedure to optimize recovery of transformed plants. PCR and Southern blot analyses confirmed the integration of the *N* genes into the chrysanthemum genome. Most of the putative transgenic plants tested gave PCR pos. (97%) indicating that the kanamycin selection procedure was effective and helped reduce the no. of escapes. One hundred and fifty eight transgenic *Polaris* and sixty six transgenic *Golden Polaris* plants were obtained with different *N* gene constructs. The cultivar *Iridon* was also transformed with the three *N* gene constructs, and two hundred and seventy three independent transgenic lines were recovered. These results demonstrate the efficiency of the procedures used to transfer genetic material into the genome of chrysanthemum cultivars recalcitrant to regeneration.

L19 ANSWER 15 OF 12 CAPLUS COPYRIGHT 2002 ATF

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1551 and LBA 3402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1551 and **pBin19**, while polymerase chain reaction anal. indicated the presence of the **neomycin phosphotransferase** gene in the hairy root genome. Subcultured transformed root lines grew well in selective B5 agar-solidified medium contg. kanamycin or rifampicin and without

hormones. Shake-flask expts. with fast-growing root lines showed that 40 g/l was the best sucrose concn. for biomass prodn., yielding a 463-fold increase in dry wt. after 25 days of culture. Great differences were found in the profiles of the essential oils isolated from normal and hairy roots. Gas chromatog.-mass spectrometry anal. showed the oil produced by transformed cultures to be a mixt. of 6 compn. with only one major component representing 37% of the oil content.

L118 ANSWER 16 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB Phosphoenolpyruvate carboxylase (EC 4.1.1.1) is a key enzyme in C₄-dicarboxylic acid assimilation, and represents a wide of advantage to the photosynthetic properties of C₄ plants. The genetic transfer of C₄-photosynthetic system, esp. PEPCase, into C₃ plant became a potential approach to improve the photosynthetic rate of C₃ plants. In this paper, a C₄-PEPCase cDNA from Zea mays was transferred into a C₃ plant tobacco, and a transgenic plant was constructed for further studies on the expression of C₄-PEPCase gene in C₃ plant as well as the modulation of photosynthetic system in C₃ plants. A 2.8 kb fragment of C₄-PEPCase cDNA derived from a maize PEPCase cDNA clone p8EPG-11 was subcloned into binary vector pBin19, and transconjugated into Agrobacterium tumefaciens retaining vir helper plasmid LB4404 by means of 'tri-parental mating'. Then the engineering plasmid pBEP11 harboring C₄-PEPCase cDNA was transformed into the leaf disk of tobacco by co-culture with transconjugated A. tumefaciens. Antisilencer screening yielded a patch of transformants resistant to kanamycin and the regenerated transgenic tobacco was obtained. The assay for neomycin phosphotransferase II (NPT II) showed a frequency of 80%, implying that the C₄-PEPCase cDNA neighboring the NPT II gene might have been transferred into tobacco cell. Southern blotting anal. provided further evidence that the PEPCase cDNA was stably integrated into the tobacco genome, promising the possibility of getting substantial expression of C₄-PEPCase gene in C₃ plants.

L119 ANSWER 17 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB In vitro regeneration and ballistic transformation procedures were developed for several com. chrysanthemum (Chrysanthemum grandiflora Izvelev, syn. Chrysanthemum multifidum Karst.) cultivars using leaf and stem explants. Studies of the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Iridon, and Tara, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid pBIN19 contg. the neomycin (N) gene (if that spotted wilt virus (TSWV) and the marker gene neomycin phosphotransferase II (NPT II). PCR anal. of 30 putative transgenic plants selected on kanamycin indicated that the majority of the lines (89%) were transformed and contained both genes (71%). However, some transgenic lines contained only one of the genes: either the NPT II (15%) or the TSWV (N) gene (14%). Southern blot anal. on selected transgenic lines confirmed the integration of the TSWV (N) gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

L119 ANSWER 18 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB A method for selecting transgenic plants based in the polymerase chain reaction (PCR) is proposed. It is applicable to primary screening of transgenic plants obtained by copollination with Agrobacterium which contains any vector carrying neomycin phosphotransferase genes from transposon Tn5 and Streptococcus (for example pBIN19). These genes confer kanamycin resistance in plants and bacteria resp. The absence of strong homol. between these two genes allows one to perform two PCRs in the same reaction mixt. Thus simultaneous selection of transgenic

plants and identification of *Agrobacterium* contamination are possible. A simple procedure for prepg. small samples of plant DNA suitable for PCR detection is also presented.

L19 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB The defective gene encoding **neomycin** phosphotransferase (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the wt NPTII enzyme activity.

L19 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Cucumber (*Cucumis sativus* L.) petiole and leaf segments of two pickling genotypes were transformed with *A. tumefaciens* strain LEA 4404, an octopine Ti-plasmid deletion mutant that is avirulent (disarmed plasmid), but to which were added T-DNA inserts in binary plasmids (**pBIN 19**, ca. 10 kb, and **pCEN 733**, ca. .5 kb). Expression of **neomycin** phosphotransferase (NPT II) encoding resistance to the aminoglycoside kanamycin was used as a selectable marker. Factors which influenced the frequency of callus development on medium contg. kanamycin (75 mg l⁻¹) were explant size, bacterial strain, and length of exposure, cocultivation period, and presence of acetosyringone. The optimal procedure involved exposing segments of petiole (4-6 mm in length x 0.5 cm²) segments to a bacterial suspension (10⁸ cells ml⁻¹ contg. 10⁻⁶ M acetosyringone for 5 min, followed by a 48 h cocultivation period on a tobacco feeder layer. Explants were placed on M₂ medium contg. 100 mg l⁻¹ carbenicillin, 75 mg l⁻¹ kanamycin, and NAA/BA (5.0/2.5 μM) or 2,4-D/BA (5.0/2.5 μM) and subcultured twice, each after a 3-5 wk period, onto fresh media. The overall frequency of transformed callus was 10-50%; the frequency of plantlet regeneration from transformed callus was 5-15%. Twenty-one out of 13 individual plants recovered from two genotypes of pickling cucumber were NPT II pos. (transformation frequency of 93%). Copy no. of the NPT II gene insert (35S-NPT II-3' fragment, ca. 3.2 kb) in 3 transformed plants was estd. at 10 per haploid genome, indicative of multiple insertions within the cucumber genome. Multimers of the gene (visible as 4.4 and 6.6 kb fragments in Southern anal. were detected in the plant, suggestive of tandem duplications or repeats. Inbreeding a cross between this transformed plant and a nontransformed control shows segregation for the NPT II gene in dot-blot assays; at least 14 plants out of 12 were kanamycin pos. Copy no. in the progeny was variable, and ranged 0-10.

L19 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Co-transformation of tobacco (*Nicotiana glauca*) leaf explants with *Agrobacterium* rhizogenes harboring **pRi35S** and the binary vector **pBin19** was achieved at a frequency of 67%. The kanamycin-resistant hairy roots were cultured via a callusing phase to regenerate plants which were partially fertile when out-crossed with wild-type pollen. Phenotypic and mol. anal. of the F₁ progeny demonstrated the efficient segregation of the hairy root marker from the kanamycin resistance marker, enabling morphol. normal plants to be recovered which retained the binary vector marker gene. This co-transformation strategy provides a means of introducing non-selectable genes into plants in cases where antibiotic resistance markers are undesirable.

L19 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Two disarmed Ti-binary vectors in *A. tumefaciens* were used to produce viable transgenic strawberry plants. Fertile strawberry plants with a normal phenotype were regenerated after transformation with **pBIN6**, which carries genes for nopaline synthase (nps) and **neomycin** phosphotransferase (nptII) (conferring kanamycin resistance). The transfer and expression of the two genes was confirmed by Southern blot anal., the detection of nopaline synthase (NOS) activity in vegetative and reproductive tissues and rooting in vitro in the presence of kanamycin.

The nos gene continued to be expressed in glasshouse-grown plants many months after removal from in vitro growth conditions. After selfing the R0 plants nos segregated in the R1 progeny according to a 3:1 Mendelian ratio. In in vitro germinated seedlings there was complete correlation between the presence of nopaline synthase activity and the ability of leaf segments to produce callus on a medium contg. kanamycin. Transgenic clones that exhibited an abnormal phenotype assocd. with cytokinin overprodu. were produced when plants were transformed with pSS1, a deriv. of pBIN19 carrying both the nptII gene and the ipt gene encoding the enzyme isopentenyltransferase). Shoots of these clones grew on hormone-free medium, could not be induced to root and their growth was unaffected by the presence of 30 mg/g/ml kanamycin in hormone-free media.

=> d 119 11-22

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(Y)/N:Y

L19 ANSWER 11 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1946:376101 BIOSIS
DN BA 0:62686
TI AGROBACTERIUM-MEDIATED TRANSFORMATION OF THE CULTIVATED STRAWBERRY
FRAGARIA-ANANASSA LUCH. USING DISARMED BINARY VECTORS.
AU JAMES D J; PASSEY A J; BAREARA D J
CS INST. HORTICULTURAL RESEARCH, EAST MALLING, MALLSTONE, KENT, ME19 6BJ, UK.
SO PLANT SCI LIMERICK, (1991) 69 (1), 79-84.
COPEN: HUSCE4. ISSN: 0168-8452.
FS BA; OLD
LA English

L19 ANSWER 12 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96309067 EMBASE
DN 160329067
TI Screening of transgenic plants using polymerase chain reaction.
AU Bogomolov L.; Shilpa O.A.; Skryabin K.B.
CS Centre of Bioengineering, Russian Academy of Sciences, Moscow 117984,
Russian Federation
SO Molekulyarnaya Biologiya, (1993) 27/4 (947-951).
ISSN: 0926-8984 CODEN: MOBIBO
CY Russian Federation
DT Journal; Article
FS 03 Human Genetics
03 Clinical Biochemistry
LA Russian
SL English; Russian

L19 ANSWER 13 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96309348 EMBASE
DN 160309348
TI Modified binary plant transformation vectors with the wild-type gene
encoding NPTII.
AU Della F.S.S.; Farmerlindl J.K.; Panchuk B.; Pelcher L.E.; Keller W.
CS Plant Biotechnology Institute, 110 Gymnasium Road, Saskatoon, Sask. S7N
8L5, Canada
SO Gene, (1992) 122/1 (383-384).
ISSN: 0378-1119 CODEN: GENED6
CY Netherlands
DT Journal; Article
FS 04 Microbiology
LA English
SL English

L19 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-026724
 TI Agrobacterium tumefaciens versus biolistic-mediated transformation of chrysanthemum cvs. Polaris and Golden Polaris with nucleocapsid protein genes of three tospovirus species
 AU Yepez, L. M.; Mittak, V.; Slightom, J. L.; Pang, S.-Z.; Gonsalves, D.
 CS Department of Plant Pathology, Cornell University New York State Agricultural Experiment Station, Geneva, NY, 14456, USA
 SO Acta Horticulturae (1999), 482(International Symposium on Cut Flowers in the Tropics, 1997, 209-218
 CCIEN: AHORAI; ISSN: 0567-7572
 PB International Society for Horticultural Science
 DT Journal
 LA English
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L19 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-026724
 TI Agrobacterium-mediated transformation of Artemisia absinthium (wormwood) and production of secondary metabolites
 AU Kim, S.; Benatti, A.; Roselli, G.; Marzetti, D.; Schiff, S.; Magherini, R.
 CS Dipartimento di fitofarmacologia, Università Firenze, Florence, I-50144, Italy
 SO Plant Cell Reports (1997), 16(10), 725-730
 CCIEN: PCRRD; ISSN: 0721-7714
 PB Springer
 DT Journal
 LA English

L19 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-026724
 TI Ti plasmid-mediated transformation of tobacco with C4-PEPCase cDNA from Zea mays
 AU Pang, Long-Ying; Ling, Jun; Wang, Chao-Ming; Shi, Jiao-Nai
 CS Shanghai Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai, 200 32, Peop. Rep. China
 SO Zhanwu Shenli Xuebao (1995), 21(3), 281-8
 CCIEN: CWSPIA; ISSN: 0257-4829
 DT Journal
 LA Chinese

L19 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-05317413 CAPLUS
 DN 14-0219623
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of tobacco etch virus
 AU Yepez, Luz Marcela; Mittak, Veronica; Pang, Shenk-Zhi; Gonsalves, Carol; Slightom, Jerry L.; Gonsalves, Dennis
 CS Dep. Plant Pathology, Cornell Univ., Geneva, NY, 14456, USA
 SO Plant Cell Rep. (1995), 14(11), 694-6
 CCIEN: PCRRD; ISSN: 0721-7714
 DT Journal
 LA English

L19 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2002 ACS
 AN 14-03663648 CAPLUS
 DN 14-0263048
 TI Screening of transgenic plants using polymerase chain reaction
 AU Babepinas, L.; Souliga, G. A.; Skryabin, K. G.
 CS Vant. Plazng., Moscow, 117984, Russia

SO Mol. Biol. (Moscow) (1993), 27(4), 947-51
CODEN: MMBIRO; ISSN: 0026-8934
DT Journal
LA Russian

L19 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1993:95283 CAPLUS
DN 118:95283
TI Modified binary plant transformation vectors with the wild-type gene encoding NPTII
AU Batla, Raju S. S.; Hammerlindl, Joe K.; Panchuk, Barry; Polcher, Lawrence E.; Keller, Wilf
CS Plant Biotechnol. Inst., Natl. Res. Councl. Canada, Saskatoon, SK, S7N 6W9, Can.
SO Gene (1992), 122(2), 383-4
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English

L19 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1992:95161 CAPLUS
DN 111:95161
TI Factors influencing Agrobacterium tumefaciens mediated transformation and expression of kanamycin resistance in pickling cucumber
AU Simentov, G. G.; Alpert, K.; Tang, F. A.; Funja, Z. K.
CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA
SO Plant Cell, Tissue Organ. Cult. (1992), 31(3), 185-93
CODEN: PTEEDJ; ISSN: 0167-6857
DT Journal
LA English

L19 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1990:166749 CAPLUS
DN 113:166749
TI Recovery of morphologically normal transgenic tobacco from hairy roots co-transformed with Agrobacterium rhizogenes and a binary vector plasmid
AU Halametz, H.; Boulton, M. E.; Shirsat, A. H.; Croy, E. J.; Ellis, J. R.
CS Exp. Biol. Sci., Univ. Durham, Durham, RG12 6EY, UK
SO Plant Cell Rep. (1990), 9(2), 88-92
CODEN: PCREDD; ISSN: 0721-7714
DT Journal
LA English

L19 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1990:110407 CAPLUS
DN 113:110407
TI Agrobacterium-mediated transformation of the cultivated strawberry (Fragaria x ananassa Duch.) using disarmed binary vectors
AU James, David J.; Passey, Andrew J.; Barbara, Derek J.
CS Inst. Hortic. Res., Maidstone/Kent, ME19 6BJ, UK
SO Plant Sci. (Limerick, Irel.) (1990), 69(1), 79-94
CODEN: PLSC64; ISSN: 0168-9452
DT Journal
LA English

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NEWS 4 Feb 01 SKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 06 Gene Names now available in BIOSIS
NEWS 7 Mar 12 TOXLIT no longer available
NEWS 8 Mar 12 TECTHERMO no longer available
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NEWS 21 Jun 10 INTFILL has been reloaded

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=> s X69322

L1 6 X69322

=> d 11 1-6

L1 ANSWER 1 OF 6 AGRICOLA
AN 94:0558 AGRICOLA
DN IN2236/253
TI Molecular characterization of a cDNA clone encoding glutamine synthetase from a gymnosperm, *Pinus sylvestris*.
AU Canton, F.R.; Garcia-Gutierrez, A.; Gallardo, F.; Vicente, A. De; Canovas, F.M.
AV ENAL (QK711.P62)
SO Plant molecular biology, Aug 1993. Vol. 22, No. 5. p. 819-828
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDB; ISSN: 0167-4412
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L1 ANSWER 2 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:499949 BIOSIS
DN PREV199306123956
TI The U6 snail nuclear RNA gene family of potato.
AU Guerinot, P. (1); Waucho, F.
CS (1) Dep. Botany, Univ. Leicester, University Road, Leicester LE1 7RH UK
SO Plant Molecular Biology, (1993) Vol. 22, No. 5, pp. 807-818.
ISSN: 0167-4412.
DT Article
LA English

L1 ANSWER 3 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:499948 BIOSIS
DN PREV199306123955
TI Molecular characterization of a cDNA clone encoding glutamine synthetase from a gymnosperm, *Pinus sylvestris*.
AU Canton, Francisco R.; Garcia-Gutierrez, Angel; Gallardo, Fernando; De Vicente, Antonio; Canovas, Francisco M. (1)
CS (1) Lab. Bioquímica Biología Molecular, Univ. Malaga, E-29071 Malaga Spain
SO Plant Molecular Biology, (1993) Vol. 22, No. 5, pp. 819-828.
ISSN: 0167-4412.
DT Article
LA English

L1 ANSWER 4 OF 6 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 1993:1743 EMBASE
TI The glutamine synthetases of rhizobia: Phylogenetics and evolutionary implications.
AU Turner S.L.; Young J.P.W.

CS S.L. Turner, Department of Biology, University of York, P.O. Box 373, York
YO10 5YW, United Kingdom. slt1@york.ac.uk
JC Molecular Biology and Evolution, (2000) 17/2 309-319).
Refs: 41
ISSN: 0237-4038 CODEN: MBEVEJ
CY United States
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L1 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2000:133904 CAPLUS
DN 132:162039
TI Poplar trees containing a constitutively expressed pine glutamine
synthetase transgene for improved nitrogen metabolism
IN Kirby, Edward G.; Canovas Rancis, Francisco; Gallardo Alba, Fernando
PA Rutgers, the State University of New Jersey, USA
SO PCT Int. Appl., 50 pp.
CODEN: PIKXD3

DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000018729	A1	20000314	WO 1999-US18267	19990811
W: AE, AL, AM, AT, AU, AV, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, DE, DF, DK, DM, EE, EF, FI, GB, GG, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KH, KF, LZ, LL, LR, LS, LT, LU, LV, MD, ME, MF, MG, MW, MX, NY, NZ, PL, PT, PQ, RU, SD, SE, SG, SI, SK, SL, TL, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, EG, EN, ES, EU, FI, FR, FW, FW: BE, BR, BG, BS, BW, BL, SI, SZ, US, ZW, AT, BE, CH, CY, DE, DK, EE, FI, FR, GE, GR, HE, IT, LU, MC, ML, PT, SE, BF, BJ, CF, CG, CI, CM, CA, CN, CW, HM, ME, NE, SN, TE, TG AU 9957734 A1 20000316 AU 1999-57734 19990811 FRAI US 1998-06031P P 19980311 WO 1999-US18167 W 19990811				

FE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE FE FORMAT

L1 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 1993:063854 CAPLUS
DN 119:203854
TI Molecular characterization of a cDNA clone encoding glutamine synthetase
from a gymnosperm, Pinus sylvestris
AU Canton, Francisco R.; Garcia-Butierrez, Angel; Gallardo, Fernando; de
Vicente, Antonio; Canovas, Francisco M.
CS Fac. Cienc., Univ. Malaga, Malaga, E-29011, Spain
SO Plant Mol. Biol. (1993), 22(5), 819-28
CODEN: PMBID; ISSN: 0167-4412
DT Journal
LA English

=> FILE STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

12.75

12.96

FULL ESTIMATED COST

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.48	13.44

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=> s glutamine(w synthetase and plant
L2 3364 GLUTAMINE(W SYNTHETASE AND PLANT

=> s l1 and gymnosperm
L2 54 L2 AND GYMNOSEPERM

=> s l3 and pinus
L4 16 L3 AND PINUS

=> s l4 and transform?
L3 2 L4 AND TRANSFORM?

=> d 11 1-2

L1 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:871-68 BIOSIS

DN PREV2001:03:13-82

TI The promoter of a cytosolic **glutamine synthetase** gene
from the conifer **Pinus sylvestris** is active in cotyledons of
germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.

AU Avila, Concepcion; Cantin, Francisco R.; Barnstein, Pilar; Suarez,
Maria-Fernanda; Marracini, Pierre; Rey, Manuel; Humara, Jaime M.; Ordas,
Ricardo; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de
Biotecnologia, Unidad Asociada UMA-CSIC, Universidad de Malaga, E-29071,
Malaga; canovas@uma.es Spain

SO Physiologia Plantarum, (July, 2001) Vol. 112, No. 3, pp. 388-396. print.
ISSN: 0031-9717.

DT Article

LA English

SL English

L1 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 2000:133864 CAPLUS

DN 132:162039

TI Poplar trees containing a constitutively expressed pine **glutamine
synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando
FA Rutgers, the State University of New Jersey, USA

SO ECT Int. Appl., 30 pp.

COBEN: P1XAD4

DT Patent

LA English

FAM.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	WO 2000009726	A1	20000224	WO 1999-US19267	19990811
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KH, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MP, MX, MY, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TK, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, BG, BR, BS, BU, TJ, TM			
	EW:	GH, MI, PE, LS, MN, SD, SL, SZ, UG, ZA, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, CA, GM, GW, ML, MR, NE, SN, TD, TG			
	AU 9057724	A1	20010306	AU 1999-57734	19990811
PRAI	US 1999-96031P	P	19990811		
	WO 1999-US18167	W	19990811		
RE.CNT	3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

=> s 14 1-10

MISSING OPERATOR 14 1-10

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> d 14 1-10

L4 ANSWER 1 OF 36 AGRICOLA

AN 1999:01141 AGRICOLA

DN IND21230710

TI Two different roles of early development and nitrogen assimilation in **gymnosperm** seedlings.

AU Garcia-Gutierrez, A.; Dubois, F.; Canton, F.R.; Gallardo, F.; Sangwan, R.S.; Canovas, F.M.

AV DNAI 00710.F681

SO The Plant journal : for cell and molecular biology, Jan 1998. Vol. 13, No. 2. p. 187-199

Publisher: Oxford : Blackwell Sciences Ltd.

ISSN: 0960-7412

NTE Includes references

CY England; United Kingdom

DT Article

FS Non-U.S. Imprint other than FAG

LA English

L4 ANSWER 2 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:27333 BIOSIS

DN PER2001021330

TI Molecular and enzymatic analysis of ammonium assimilation in woody **plants**.

AU Suarez, Maria-Fernanda; Avila, Concepcion; Gallardo, Fernando; Canton, Francisco R.; Garcia-Gutierrez, Angel; Gonzalo Claros, M.; Canovas, Francisco M. II.

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biociencia, Unidad Asociada UMA-CSIC, Universidad de Malaga, E29071, Malaga; canovas@uma.es Spain

SO Journal of Experimental Botany, (April, 2002) Vol. 53, No. 370, pp. 891-904. <http://jxb.oupjournals.org>. print.

ISSN: 0022-0957.

DT Article

LA English

L4 ANSWER 3 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:068220 BIOSIS
 DN PREV2002008220
 TI Effect of nitrogen stress on growth, soluble metabolites, and **glutamine synthetase** activity of jack pine callus cultures.
 AU Carballo Rivero, Gilda; Tremblay, M.-Francine (1); Charest, Christiane; Laroche, Sylvie
 CS (1) Chaire AFQ, Département des sciences appliquées, Université du Québec en Abitibi-Témiscamingue, 440 boul. de l'Université, Rouyn-Noranda, Qc, J9X 5E4; francine.tremblay@uqat.quebec.ca Canada
 SO Journal of Plant Nutrition, (March, 2002) Vol. 25, No. 3, pp. 443-455. <http://www.tandf.co.uk/journals/product/productid/PJN>. print.
 ISSN: 0190-4387.
 DT Article
 LA English

 L4 ANSWER 4 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:371462 BIOSIS
 DN PREV200100371462
 TI The promoter of a cytosolic **glutamine synthetase** gene from the conifer *Pinus sylvestris* is active in cotyledons of germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.
 AU Avila, Concepcion; Canton, Francisco R.; Barnestein, Pilar; Suarez, Maria-Fernanda; Marraschini, Pierre; Rey, Manuel; Humara, Jaime M.; Ordas, Ricardo; Canovas, Francisco M. (1)
 CS (1) Departamento de Biología Molecular y Bioquímica, Instituto Andaluz de Biotecnología, Unidad Asociada UMA-CSIC, Universidad de Málaga, E-29071, Málaga; canovas@uma.es Spain
 SO Physiologia Plantarum, (July, 2001) Vol. 112, No. 3, pp. 388-396. print.
 ISSN: 0031-9317.
 DT Article
 LA English
 SL English

 L4 ANSWER 5 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:192113 BIOSIS
 DN PREV200100192113
 TI Effect of phosalone herbicide on nitrogen metabolism in *Pinus radiata* and *Laccaria bicolor*.
 AU Gonzalez-Rodr, M. E.; Iriberril, N.; Durakeitia, M. E.; Lourdin-Relsamain, I.; Gonzalez-Munoz, C. (1)
 CS (1) Department of Plant Biology and Ecology, University of The Basque Country, E-48960, Leizor; gvgomb@leizor.ehu.es Spain
 SO Phytin (Hain), (2000) Vol. 40, No. 4, pp. 71-77. print.
 ISSN: 0079-2447.
 DT Article
 LA English
 SL English

 L4 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:193110 BIOSIS
 DN PREV200100193110
 TI Spatial and temporal expression of two cytosolic **glutamine synthetase** genes in Scots pine: Functional implications on nitrogen metabolism during early stages of conifer development.
 AU Avila, Concepcion; Suarez, Maria-Fernanda; Gomez-Maldonado, Josefa; Canovas, Francisco M. (1)
 CS (1) Departamento de Biología Molecular y Bioquímica, Facultad de Ciencias, Instituto Andaluz de Biotecnología, Universidad de Málaga, Campus Universitario de Teatinos s/n, E-29071, Málaga; canovas@uma.es Spain
 SO Plant Journal, (January, 2001) Vol. 25, No. 1, pp. 93-102. print.
 ISSN: 0969-7412.
 DT Article
 LA English

SL English

L4 ANSWER 7 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:298481 BIOSIS

DN PREV200000398481

TI Two genes encoding distinct cytosolic **glutamine synthetases** are closely linked in the pine genome.

AU Avila Saenz, Concepcion (1); Munoz-Chapuli, Ramon; Plomion, Christophe; Elongerio, Jean-Marie; Canovas, Francisco M.

CS (1) Departamento de Biologia Molecular y Bioquimica, Facultad de Ciencias e Instituto Andaluz de Biotecnologia, Universidad de Malaga, Campus de Teatinos s/n, E-29071, Malaga Spain

SO FEBS Letters, (01 July, 2000) Vol. 477, No. 3, pp. 237-243. print.
ISSN: 0014-5793.

DT Article

LA English

SL English

L4 ANSWER 2 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:177985 BIOSIS

DN PREV200000377985

TI Compression wood-responsive proteins in developing xylem of maritime pine (**Pinus pinaster** Ait.

AU Plomion, Christophe (1); Pionneau, Cedric; Brach, Jean; Costa, Paulo; Bailleres, Henri

CS (1) Equipe de Genetique et Amelioration des Arbres Forestiers, Institut National de la Recherche Agronomique, 33610, Pierroton France

SO Plant Physiology (Rockville), (July, 2000) Vol. 123, No. 3, pp. 959-969. print.
ISSN: 0032-0889.

DT Article

LA English

SL English

L4 ANSWER 9 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:160712 BIOSIS

DN PREV200000360712

TI Expression analysis of a cytosolic **glutamine synthetase** gene in cotyledons of Scots pine seedlings: Developmental, light regulation and spatial distribution of specific transcripts.

AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde; Canovas, Francisco M. (1)

CS (1) Laboratorio de Bioquimica y Biologia Molecular, Facultad de Ciencias, Instituto Andaluz de Biotecnologia, Universidad de Malaga, 29071, Malaga Spain

SO Plant Molecular Biology, (July, 2000) Vol. 40, No. 4, pp. 623-634. print.
ISSN: 0167-4412.

DT Article

LA English

SL English

L4 ANSWER 10 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1999:445887 BIOSIS

DN PREV199900445887

TI Expression analysis of a cytosolic **glutamine synthetase** gene in cotyledons of Scots pine seedlings: Developmental, light regulation and spatial distribution of specific transcripts.

AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde; Canovas, Francisco M. (1)

CS (1) Laboratorio de Bioquimica y Biologia Molecular, Facultad de Ciencias-Instituto Andaluz de Biotecnologia, Universidad de Malaga, 29071, Malaga Spain

SO Plant Molecular Biology, (July, 1999) Vol. 40, No. 4, pp. 623-634. print.
ISSN: 0167-4412.

DT Article
LA English
SL English

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=> d 16 1-30

L6 ANSWER 1 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:161120 BIOSIS

DN PREV210102268333

TI Molecular and enzymatic analysis of ammonium assimilation in woody plants.

AU Slason, Maria Fernanda; Avila, Concepcion; Gallardo, Fernando; Canton, Francisco R.; Garcia-Gutierrez, Angel; Gonzalo Claros, M.; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biologia, Unidad Asociada UMA-CSIC, Universidad de Malaga, E29071, Malaga; canovas@uma.es Spain

SO Journal of Experimental Botany, (April, 2001 Vol. 53, No. 370, pp. 891-904. <http://jxb.oxfordjournals.org>. print. ISSN: 0022-0857.

DT Article

LA English

L6 ANSWER 2 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:161120 BIOSIS

DN PREV210102268322

TI Effect of nitrogen stress on growth, soluble metabolites, and glutamine synthetase activity of jack pine callus cultures.

AU Carrier, Robert, Gilco; Tremblay, M.-Francine (1); Charast, Christiane; Lalonde, Sylvie

CS (1) Centre AFD, Departement des sciences appliquees, Universite du Quebec en Abitibi-Temiscamingue, 445 boul. de l'Universite, Rouyn-Noranda, Qc, J9X 8M4; francine.tremblay@uqat.quebec.ca Canada

SO Journal of Plant Nutrition, (March, 2002 Vol. 25, No. 3, pp. 443-455. <http://www.tandf.co.uk/journals/product/productid/PLN>. print. ISSN: 0160-4167.

DT Article

LA English

L6 ANSWER 3 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:161162 BIOSIS

DN PREV21010351662

TI The promoter of a cytosolic glutamine synthetase gene from the conifer *Pinus sylvestris* is active in cotyledons of germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.

AU Avila, Concepcion; Canton, Francisco R.; Barnstein, Pilar; Suarez, Maria-Fernanda; Marzocchini, Pierre; Fey, Manuel; Humara, Jaime M.; Ordas, Ricardo; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biologia, Unidad Asociada UMA-CSIC, Universidad de Malaga, E-29071, Malaga; canovas@uma.es Spain

SO Physiologia Plantarum, (July, 2001) Vol. 112, No. 3, pp. 388-396. print. ISSN: 0031-9317.

DT Article

LA English

SL English

L6 ANSWER 7 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2000:366712 BIOSIS
 DN PREV200000366712
 TI Expression analysis of a cytosolic **glutamine synthetase**
 gene in cotyledons of Scots pine seedlings: Developmental, light
 regulation and spatial distribution of specific transcripts.
 AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde;
 Canovas, Francisco M. (1)
 CS (1) Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias,
 Instituto Andaluz de Biotecnología, Universidad de Málaga, 29071, Málaga
 Spain
 SO Plant Molecular Biology, (July, 2000) Vol. 40, No. 4, pp. 623-634. print.
 ISSN: 0167-4412.
 DT Article
 LA English
 SL English

L6 ANSWER 8 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 1
 AN 2000:398431 BIOSIS
 DN PREV200000398431
 TI Two genes encoding distinct cytosolic **glutamine**
synthetases are closely linked in the pine genome.
 AU Avila Saez, Christophe (1); Munoz-Chapuli, Ramon; Plomion, Christophe;
 Frigerio, Jean-Marc; Canovas, Francisco M.
 CS (1) Departamento de Biología Molecular y Bioquímica, Facultad de Ciencias
 e Instituto Andaluz de Biotecnología, Universidad de Málaga, Campus de
 Teatinos s/n, E-29071, Málaga Spain
 SO FEBS Letters, (21 July, 2000) Vol. 477, No. 3, pp. 237-243. print.
 ISSN: 0014-5793.
 DT Article
 LA English
 SL English

L6 ANSWER 9 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:192373 BIOSIS
 DN PREV200100192373
 TI Effect of pho-phosphinotricin herbicide on nitrogen metabolism in
Pinus radiata and **Laccaria bicolor**.
 AU Gonzalez-Mora, M. E.; Iriberry, N.; Dunabentia, M. K.;
 Leureiro-Beltramin, I.; Gonzalez-Murua, C. (1)
 CS (1) Department of Plant Biology and Ecology, University of The Basque
 Country, E-48 61, Bilbao: gvgomcb@ig.ehu.es Spain
 SO Phyton (Horn), (2000) Vol. 40, No. 4, pp. 71-77. print.
 ISSN: 0179-1947.
 DT Article
 LA English
 SL English

L6 ANSWER 10 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1999:455647 BIOSIS
 DN PREV199900455647
 TI Expression analysis of a cytosolic **glutamine synthetase**
 gene in cotyledons of Scots pine seedlings: Developmental, light
 regulation and spatial distribution of specific transcripts.
 AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde;
 Canovas, Francisco M. (1)
 CS (1) Laboratorio de Bioquímica y Biología Molecular, Facultad de
 Ciencias-Instituto Andaluz de Biotecnología, Universidad de Málaga, 29071,
 Málaga Spain
 SO Plant Molecular Biology, (July, 1999) Vol. 40, No. 4, pp. 623-634.
 ISSN: 0167-4412.
 DT Article
 LA English

SL English

L6 ANSWER 11 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:35420 BIOSIS
DN PFEV1998:0084420
TI Effects of phosphinotricin treatment on **glutamine synthetase** isoforms in Scots pine seedlings.
AU Avila, Concepcion; Garcia-Gutierrez, Angel; Crespillo, Remedios; Canovas, Francisco M. (1)
CS (1) Lab. Bioquim. Biol. Mol., Fac. Ciencias-Inst. Andaluz Biotecnol., Univ. Malaga, Campus de Teatinos, 29071 Malaga Spain
SO Plant Physiology and Biochemistry (Paris), (Dec., 1998) Vol. 36, No. 12, pp. 357-363.
ISSN: 0941-5448.
DT Article
LA English

L6 ANSWER 11 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:51618 BIOSIS
DN PFEV1998:011618P
TI Purification and characterization of NADP+-linked isocitrate dehydrogenase from Scots pine: Evidence for different physiological roles of the enzyme in primary development.
AU Palenc, Jesus; Gallardo, Fernando (1); Suarez, Maria F.; Canovas, Francisco M.
CS (1) Lab. Bioquimica Biol. Molecular, Fac. Ciencias, Univ. Malaga, E-29071 Malaga Spain
SO Plant Physiology (Rockville), (Oct., 1998) Vol. 118, No. 2, pp. 617-626.
ISSN: 0032-0899.
DT Article
LA English

L6 ANSWER 13 OF 11 AGRICOLA DUPLICATE 2
AN 1998:1548 AGRICOLA
DN INE11998:1
TI Two different modes of early development and nitrogen assimilation in **gymnosperm** seedlings.
AU Garcia-Gutierrez, A.; Dubois, F.; Canton, F.E.; Gallardo, F.; Sangwan, F.S.; Canovas, F.M.
AV ENAL (QF719.F66)
SO The Plant journal : for cell and molecular biology, Jan 1998. Vol. 13, No. 2, p. 187-198
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0969-7412
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. reprint other than FAC
LA English

L6 ANSWER 14 OF 32 CAPIUS COPYRIGHT 2002 ACS
AN 1998:22949 CAPIUS
DN 198:0406
TI Juniter cDNA sequences are highly conserved among eukaryotic genomes
AU Eustace, L. J.; Kinlaw, C. S.; Williams, C. S.
CS Department of Biochemistry & Biophysics-Genetics, Texas A and M University, College Station, TX, 77843, USA
SO Texas Journal of Science (1998), 50(1), 75-84
CODEN: TJSCAH; ISSN: 0040-4403
PB Texas Academy of Science
DT Journal
LA English

L6 ANSWER 15 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1996:484937 BIOSIS
 EN PREV199609200093
 TI High-level expression of **Pinus sylvestris glutamine synthetase** in *Escherichia coli*: Production of polyclonal antibodies against the recombinant protein and expression studies in pine seedlings.
 AU Canton, Francisco R. (1); Garcia-Gutierrez, Angel; Crespiello, Remedios; Canovas, Francisco (1)
 CS (1) Lab. Piqueur. Biol. Mol., Fac. Ciencias, Univ. de Malaga, E-29071 Malaga Spain.
 SO FEBS Letters, (1996) Vol. 393, No. 2-3, pp. 205-210.
 ISSN: 0014-1798.
 DT Article
 LA English

L6 ANSWER 16 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:420991 BIOSIS
 EN PREV199509105589
 TI Interactions of elevated CO₂, NH₃ and C-3 on mycorrhizal infection, gas exchange and N metabolism in saplings of Scots pine.
 AU Perez-Jorda, Maria (1); Ducek, Thomas A.; Epp, Bigliola; Kuiper, Pieter J. C.
 CS (1) Dep. Trop. Weed Sci., Res. Inst. Agrobiol. Soil Fertility (AB-DLO), P.O. Box 14, Bornsesteeg 65, 6700 AA Wageningen Netherlands
 SO Plant and Soil, (1995) Vol. 136, No. 1, pp. 107-116.
 ISSN: 0032-079X.
 DT Article
 LA English

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:46693 BIOSIS
 EN PREV199509060961
 TI Regulation of **glutamine synthetase** gene expression in Scots pine (*Pinus sylvestris* L.) seedlings.
 AU Eislinger, Martin W. (1); Mohr, Hans
 CS (1) Section Paediatriche Endokrinol., Kinderklinik Eberhard-Karls-Univ., Ruerbelstrasse 19-23, D-72070 Tuebingen Germany
 SO Mohr, H.; Moertz, K. Nova Acta Leopoldina, (1994) Vol. 70, No. 288, pp. 109-111. Nova Acta Leopoldina; The terrestrial nitrogen cycle as influenced by man.
 Publisher: Deutsche Akademie der Naturforscher Leopoldina
 August-Beckel-Strasse 50a, Halle (Saale), Germany.
 Meeting Info.: Symposium Halle/Saale, Germany, September 29-October 1, 1993
 ISSN: 0869-5634. ISBN: 3-335-00417-5.
 DT Book; Conference
 LA English

L6 ANSWER 18 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:44244 BIOSIS
 EN PREV199508198514
 TI Nitrogen metabolism in cultured cotyledon explants of **Pinus radiata** during de novo organogenesis.
 AU J y, Richard W. Iv; Bender, Ludwig; Thrope, Trevor A. (1)
 CS (1) Plant Physiol. Res. Group, Dep. Biol. Sci., Univ. Calgary, Calgary, AB T2N 1N4 Canada
 SO Physiologia Plantarum, (1994) Vol. 92, No. 4, pp. 681-688.
 ISSN: 0031-9317.
 DT Article
 LA English

L6 ANSWER 19 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:162506 BIOSIS
 EN PREV199407275506
 TI Effect of atmospheric ammonia on the nitrogen metabolism of Scots pine

Pinus sylvestris) needles.

AU Perez-Soba, M. (1); Stulen, I.; Van Der Eerden, L. J. M.
CS (1) Dep. Plant Physiol., Res. Inst. Agrobiol. and Soil Fertility, P.O. Box
14, Bornsesteeg 65, 6700 AA Wageningen Netherlands
SO *Physiologia Plantarum*, (1994) Vol. 91, No. 4, pp. 629-636.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 20 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:449-60 BIOSIS
DN PREV1994:15(2596)
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metabolism of the needles of Scots pine trees.
AU Perez-Soba, Marta (1 ; Van Der Eerden, Ludger; Stulen, Ineke
CS (1) Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, P.O. Box 14,
Bornsesteeg 65, 6700 AA Wageningen Netherlands
SO *Plant Physiology and Biochemistry* (Montrouge), (1994) Vol. 32, No. 4, pp.
519-546.
ISSN: 0911-3424.
DT Article
LA English

L6 ANSWER 21 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:411-62 BIOSIS
DN PREV1994:4(446)
TI Appearance of nitrate reductase, nitrite reductase and **glutamine
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AU Seitz, Barbara; Setzer, Bernhard; Flaig, Helger; Mohr, Hans (1)
CS (1) Biological Inst. II, Univ. Freiburg, Schaenzlestrasse 1, D-79104
Freiburg Germany
SO *Physiologia Plantarum*, (1994) Vol. 91, No. 3, pp. 419-426.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
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DN PREV1994:11(1444)
TI Gaseous ammonia counteracts the response of Scots pine needles to elevated
atmospheric carbon dioxide.
AU Perez-Soba, Marta (1; Van Der Eerden, Ludger J. M. (1); Stulen, Ineke;
Kluger, Pieter J. C.
CS (1) Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, P.O. Box 14,
Bornsesteeg 65, 6700 AA Wageningen Netherlands
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ISSN: 0028-646X.
DT Article
LA English

L6 ANSWER 18 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:111174 BIOSIS
DN PREV1994:11(1622)
TI Enzymes of ammonium metabolism in ectoendomycorrhizal and endomycorrhizal
symbionts of pine.
AU Rudawska, Maria (1; Kieliszewska-Racka, Barbara; Debaud, Jean-Claude;
Lewandowski, Andrzej; Gay, Gilles
CS (1) Inst. Dendrology, Polish Academy Sci., PL-62-035 Kornik Poland
SO *Physiologia Plantarum*, (1994) Vol. 92, No. 2, pp. 279-285.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:199779 BIOSIS
 DN PREV1994971227
 TI Coaction of blue light and light absorbed by phytochrome in control of
glutamine synthetase gene expression in Scots pine (*Pinus sylvestris* L.) seedlings.
 AU Emlinger, M. W.; Bolle, C.; Batschauer, A.; Oelmueller, R.; Mohr, H. (1)
 CS (1 Biol. Inst. II der Univ., Schaenzlestr. 1, D-79104 Freiburg i.Br.
 Germany
 SO Planta (Heidelberg), (1994) Vol. 192, No. 2, pp. 189-194.
 ISSN: 0032-0935.
 DT Article
 LA English

L6 ANSWER 13 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:40411 BIOSIS
 DN PREV199540411
 TI Activities and properties of **glutamine synthetase** and
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 AU Seiler, Dieter (1); Lintemann, Herbert (1); Moecker, Doreen (1);
 Thieringer, Carola (1); Jung, Klaus; Foerstel, Hilmar
 CS (1 Martin-Luther-Univ. Halle-Wittenberg, Fachbereich
 Biochemie/Biotechnologie, Inst. Biochemie, Abt. Allgemeine
 Pflanzenbiochemie, Weinbergweg 16a, D-06120 Halle Germany
 SO Angewandte Botanik, (1994) Vol. 68, No. 3-4, pp. 89-94.
 ISSN: 0066-1754.
 DT Article
 LA German
 SL German; English

L6 ANSWER 16 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:84117 BIOSIS
 DN PREV199584117
 TI Nitrogen metabolism of Douglas fir and Scots pine as affected by optimal
 nutritional and water supply under conditions of relatively high
 atmospheric nitrogen deposition.
 AU Perez-Sica, Maria (1); De Visser, Pieter H. B.
 CS (1 Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, PO Box 14,
 NL-6700 AA Wageningen Netherlands
 SO Trees (Berlin), (1994) Vol. 9, No. 1, pp. 19-25.
 ISSN: 1441-1801.
 DT Article
 LA English

L6 ANSWER 27 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:357466 BIOSIS
 DN PREV1994357466
 TI Seasonal fluctuations in the nitrogen assimilation of scots pine.
 AU Pietilainen, Pekka
 CS Muhos Res. Station Finnish Forest Res. Inst., FIN 91500 Muhos, Dep. Bot.,
 Univ. Oulu, FIN-90570 Oulu Finland
 SO Acta Universitatis Ouluensis Series A Scientiae Rerum Naturalium, (1994)
 Vol. , No. 26, pp. 1-115, I-VIII.
 ISSN: 1345-3141.
 DT Article
 LA English

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
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 AN 1995:499448 BIOSIS
 DN PREV1995499448
 TI Molecular characterization of a cDNA clone encoding **glutamine**
synthetase from a gymnosperm, *Pinus*

sylvestris.
 AU Canton, Francisco R.; Garcia-Gutierrez, Angel; Gallardo, Fernando; De
 Vicente, Antoni ; Canovas, Francisco M. (1)
 CC (1) Inst. Biogénica Biología Molecular, Univ. Malaga, E-29071 Malaga Spain.
 SO Plant Molecular Biology, (1993) Vol. 22, No. 5, pp. 819-828.
 ISSN: 0167-4412.
 DT Article
 LA English

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 DN PREV199395121600
 TI Ammonium Ion Inhibition of **Pinus strobus** L. callus growth.
 AU Kaul, K. G.; Hiffman, S. A.
 CS (1) CRS Plant and Soil Science Research, Kentucky State University,
 Frankfort, KY 40601 USA
 SO Plant Science (Elmerick), (1993) Vol. 33, No. 2, pp. 169-173.
 ISSN: 0168-9451.
 DT Article
 LA English

L6 ANSWER 30 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1993:212984 BIOSIS
 DN PREV199395121600
 TI Effect of ammonium on glutamate synthetase activity in ectomycorrhizal
 fungi, and in mycorrhizal and non-mycorrhizal Scots pine seedlings.
 AU Sargala, Pytti
 CS Finn. For. Res. Inst., Parkano Res. Stn., SF-39700 Parkano Finland
 SO Tree Physiology, (1993) Vol. 12, No. 1, pp. 93-100.
 ISSN: 0829-188X.
 DT Article
 LA English

L6 ANSWER 31 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1993:1973 BIOSIS
 DN PREV199395089973
 TI Effects of osmotic stress on foliar nitrogen metabolism of **Pinus taeda** L.
 and implications for carbohydrate metabolism.
 AU Manderscheid, R. G.; Jaeger, R.-J.; Press, L. W.
 CS (1) Institut Pflanzenekologie, Heinrich-Buff-Ring 38, D-6300 Giessen
 Germany
 SO New Phytologist, (1992) Vol. 121, No. 4, pp. 623-633.
 ISSN: 0028-646X.
 DT Article
 LA English

L6 ANSWER 32 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1993:56905 BIOSIS
 DN PREV199395032005
 TI **Glutamine synthetase** in Scots pine seedlings and its
 control by blue light and light absorbed by phytochrome.
 AU Rüdiger, W. K.; Mohr, P. (1)
 CS (1) Botanisches Inst. II der Univ., Schanzlestrasse 1, W-7800 Freiburg i.
 Br. Germany
 SO Planta (Heidelberg), (1992) Vol. 188, No. 3, pp. 396-402.
 ISSN: 0032-0935.
 DT Article
 LA English

=> d 16 10 14 11 17 24 25 32 ab

L6 ANSWER 10 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB The expression of a cytosolic **glutamine synthetase**

(GS1; EC 6.3.1.2) gene was examined in cotyledons of Scots pine seedlings. Light strongly stimulated GS1 mRNA accumulation during development. Similarly, steady-state levels of GS1 transcripts increased in dark-grown seedlings to light and decreased in dark-adapted seedlings. Light/dark adaptation affected *psbS* and *psb27* mRNA levels and chlorophyll contents in the same manner. Light-grown seedlings in the presence of the herbicide norflurazon showed a drastic decrease in mRNA for GS and photosynthetic proteins, whereas the effect of the herbicide on mitochondrial *ADP-ATP* synthase mRNA was limited. These results indicate that factors associated with developing chloroplasts could be required for maximal GS1 gene expression during seedling development. The level of GS polypeptide, determined by immunoblot, was co-regulated during seedling development in the light or dark. However, the levels of the polypeptide detected were unaltered by the light/dark adaptation treatments. The analysis of GS1 mRNA association with polysomes indicated that the discrepancies between GS protein and mRNA levels are not a result of a differential translational rate of the transcript in darkness relative to light. Two GS isoforms with different isoelectric point were resolved by two-dimensional PAGE in light- and dark-germinated plants. The relative abundance of one of them was markedly affected by light and correlated with the observed changes in GS mRNA, suggesting that the other form is not a product derived from the external transcript. In situ hybridization of excision sections showed the presence of GS1 mRNAs in mesophyll and guard cells confirming gene expression in photosynthetic tissues. High levels of transcript were detected also in nonphotosynthetic cells of apical primordia. These data suggest a dual role for the GS1 gene associated with chloroplast development/activity and glutamine biosynthesis for nitrogen mobilization during early growth of Scots pine.

L6 ANSWER 14 OF 33 CAPLUS COPYRIGHT 1991 ACS
AB Computer search algorithms for *Pinus taeda* cDNA sequences revealed that 20 of 41 *Pinus taeda* cDNA sequences had conserved homology to angiosperms, animals and/or other conifers. Ten of the 20 homologous sequences coded for highly conserved amino acid products among conifers, flowering plants and animals. Among the 20 homologous sequences, there were 12 highly conserved query sequences. These sequences code for RNA replication, RNA-cleaving proteins, glycolysis and photosynthesis. A total of 24 plant species were identified with homologies to *P. taeda* cDNA sequences. Of these families, one family of conifers and one family of monocots were represented in the matches to *P. taeda*. The remaining 16 families were dicots. Using nucleotide sequences to infer evolutionary relationships among plants will improve as more plant genomic sequences drawn from a wider taxonomic spectrum are added to public databases.

L6 ANSWER 15 OF 33 BIOSIS COPYRIGHT 1991 BIOLOGICAL ABSTRACTS INC.
AB In a previous work we reported the molecular characterization of a glutamine synthetase (GS; EC 6.3.1.2) complementary DNA from a woody plant (Garcia et al. 1990). Plant Mol. Biol. 21, 319-324. The isolated cDNA (pGSPl14) encoding a Scots pine (*Pinus sylvestris*) cytosolic subunit, was then subcloned into the expression vector pET3c to overproduce the GS polypeptide in *Escherichia coli* cells. The recombinant GS protein showed the same molecular size as a native Scots pine GS subunit. Antikidies against the pET3c-GSPl14 encoded protein were raised in rabbits by injecting purified preparations and specificity was determined by immunoprecipitation of GS activity present in pine crude extracts. In spite of the antikidies were able to recognize both cytosolic and chloroplastic GS in tomato plants, they were unable to immunodetect chloroplastic GS in green cotyledons of pine seedlings and cytosolic GS was the unique recognized polypeptide. Unlike to that found in other plant species, cytosolic GS was strongly expressed in green tissues as determined by protein and Northern analysis. Our results suggest a key role for cytosolic GS in photosynthetic tissues of conifers.

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The level of plastidic **glutamine synthetase** (GS; EC 6.3.1.3) in the cotyledonary whorl of the Scots pine (*Pinus sylvestris* L.) seedling was previously reported to be regulated by light. In the present paper we report on the control by light of the GS transcript level. A full-length GS cDNA of Scots pine was isolated (pGS1), sequenced and employed to measure GS transcript levels. Using dichromatic light treatments it was found that the transcript level is regulated by phytochrome. The strong specific effect of blue light is to be attributed to an increase of the responsiveness to phytochrome. Since no direct correlation between the transcript level and the rate of GS protein synthesis was observed, it was concluded that GS gene expression is only coarsely regulated at the level of transcript accumulation. Synthesis of GS protein is by itself light-dependent (light-mediated fine tuning of gene expression). This control at the translational level is also exerted via phytochrome with blue light determining the responsiveness of the process toward phytochrome. If the level of the far-red absorbing form of phytochrome (Pfr) is kept very low, blue light is not capable of bringing about synthesis of GS protein.

L6 ANSWER 25 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Studies were carried out on the properties of **glutamine synthetase** and glutamate dehydrogenase determined in the needles of Scots pine (*Pinus sylvestris* L.) from three various air-polluted locations (relatively unpolluted, moderately, and heavily polluted areas). The enzymes were partially purified and characterized (K-m values, pH optima, temperature dependence, Co-2- requirement). The **glutamine synthetase** activity from *P. sylvestris* grown in a polluted area is very diminished, on the other hand the glutamate dehydrogenase activity is slightly enhanced under such conditions. The enzyme activities were correlated with the natural 15N/14N isotope variations. The results are discussed with respect to the possible role of these enzymes in the nitrogen metabolism of conifers under different environmental stress conditions, particularly in terms of air pollution.

L6 ANSWER 32 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The appearance of **glutamine synthetase** (GS; EC 6.3.1.2) in response to light and nitrogen (NO-3-, NH-4+) was studied in the organs (roots, hypocotyl, cotyledonary whorl) of the Scots pine (*Pinus sylvestris* L.) seedling. Although GS activity was found to be mainly (80-85%) located in the whorl where it increased strongly in response to light, a significant GS synthesis was also detected in dark-grown seedlings. Anion-exchange chromatography was used to resolve two GS isoforms which appeared to be regulated differentially in the cotyledonary whorls. The isoform (presumably plastidic GS2) which eluted from the column at 80 mM KCl increased markedly in response to light. The other isoform (presumably cytosolic GS1), which eluted at 200 mM KCl, was not stimulated by light but tended to disappear during the experimental period of 4-12 d after sowing. Immunoblotting of pine extract yielded a prominent band with a molecular weight of 43 kDa. The linear correlation between GS activity and immunoblotable GS protein could be extrapolated through zero, showing that any increase of GS2 activity is to be attributed to the de-novo synthesis of GS activity is to be attributed to the de-novo synthesis of GS protein. Gel-filtration chromatography yielded a molecular mass for the GS holoenzyme of 340 kDa, a value which supports an octameric quaternary structure as previously suggested for angiosperms. While supplying seedlings with 10 mM NO-3- stimulated GS synthesis in the whorl by 1.8, 17 mM NH-4+ caused an incipient ammonium toxicity. Experiments using dichromatic light (simultaneous treatment with two light beams to vary the level of the physiologically active form of phytochrome, Pfr, in blue light) revealed

that synthesis of GS2 was controlled by light in the same way as previously shown for ferredoxin-dependent glutamate synthase (Fd-GOGAT; EC 1.4.7.1). Up to 10 d after sowing the strong light effect could be attributed to phytochrome action whereas between 10 and 12 d after sowing phytochrome control of GS-synthesis failed if no blue/ultraviolet-A light was provided. The data show that blue light is required to maintain responsiveness of GS2 synthesis to phytochrome. Both enzymes, GS2 as well as Fd-GOGAT, appear to be regulated coordinately to meet the demands of ammonium assimilation.

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=> s glutamine(w)synthetase and transform1 and plant and 35s
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L1 1 GLUTAMINE(W) SYNTHETASE AND TRANSFORM1 AND PLANT AND 35S AND NOS

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agrobacterium
L10 1 GLUTAMINE(W) SYNTHETASE AND TRANSFORM1 AND PLANT AND 35S AND
NOS AND AGROBACTERIUM

=> d 110 1

110 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

AN 2002:135814 CAPLUS

IN 182:162019

TI Poplar trees containing a constitutively expressed pine **glutamine
synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando

PA Rutgers, the State University of New Jersey, USA

SO PCT Int. Appl., 50 pp.

CODEN: PIXXDE

BT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	WO 1999-08267	A1	20000224	WO 1999-US18267	19990811
	W: AE, AI, AL, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, EG, FI, GB, GR, GE, GG, GM, HN, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LS, LT, LU, LV, MA, MG, MK, MN, MW, MX, NC, NZ, NL, NO, NP, PL, PT, RO, RU, SD, SE, SG, SI, SM, SN, SR, TH, TJ, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SS, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, NI, TD, TG				
	AU 9957734	A1	20000305	AU 1999-57734	19990811
PRAI	US 1998-96032F	P	1998-0811		
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L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AN 2001:133844 CAPLUS
 DN 132:162011
 TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism
 IN Kirby, Edward G.; Canovas Ramis, Francisco; Gallardo Alba, Fernando
 PA Rutgers, the State University of New Jersey, USA
 SO ICT Int. Appl., 50 pp.
 CODEN: PIXX52
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	WO 200008276	A1	20000214	WO 1999-US18267	19990811
	W: AE, AL, AN, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, EG, FI, GB, GR, GE, GG, GM, HN, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NC, NZ, NL, NO, NP, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, SN, SR, TH, TJ, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZG, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SS, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, NI, TD, TG				
	AU 9957734	A1	20000305	AU 1999-57734	19990811
PRAI	US 1998-96032F	P	1998-0811		
	WO 1999-US18267	W	1999-0811		
RE.CNT	3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AN 1997:568298 CAPLUS
 DN 127:215985
 TI Transgenic **plants** engineered for improved nitrogen metabolism/assimilation using vectors containing inducible promoters for recombinant expression of enzymes
 IN Good, Allen G.; Stroehrer, Virginia L.; Muench, Douglas G.
 PA Governors of the University of Alberta, Can.; Good, Allen G.; Stroehrer, Virginia L.; Muench, Douglas G.
 SO PCT Int. Appl., 44 pp.
 CODEN: PIXX52
 DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	WO 9730163	A1	19970921	WO 1997-CA100	19970214
	W:	AL, AM, AT, AU, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LF, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SF, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AS, BY, EG, KG, MD, RU, TJ, TM			
	RW:	KE, LS, MW, SD, SJ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, HE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	CA 2169502	AA	19970415	CA 1996-2169502	19960214
	US 6084723	A	20000004	US 1996-599968	19960214
	AU 9715863	A1	19970402	AU 1997-15868	19970214
	AU 727264	B1	2001107		
	GB 2225122	A1	19981113	GB 1998-17304	19970214
	GB 2325132	B2	20011124		
	GB 2349558	A1	20001115	GB 2000-23359	19970214
PRAI	CA 1996-2169502	A	19960214		
	US 1996-599968	A2	19960214		
	GB 1998-17304	A3	19970214		
	WO 1997-CA100	W	19970214		

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 (PLANT OR PLANTS)
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▶ Submitting Sequence Data to GenBank

The most important source of new data for GenBank® is direct submissions from scientists. GenBank depends on its contributors to help keep the database as comprehensive, current, and accurate as possible. NCBI provides timely and accurate processing and biological review of new entries and updates to existing entries, and is ready to assist authors who have new data to submit.

NOTE: The 'Authorin' submission tool and the E-mail submission form were phased out on December 31, 1998, and submissions made with those tools are no longer accepted as of that date. Instead, please use the improved submission tools, [BankIt](#) and [Sequin](#), described below.

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▶ Receiving an accession number for your manuscript

Most journals now expect that DNA and amino acid sequences that appear in articles will be submitted to a sequence database before publication. Soon after submission, you will receive an accession number from the database which you will be able to use in your article to refer to the sequence. Please be aware that it is only necessary to submit the sequence to one database, whichever one is most convenient, without regard for where the sequence may be published. Data exchange between GenBank, EMBL and DDBJ occurs daily. Sequence data submitted in advance of publication can be kept confidential if requested.

Below are described various ways of submitting DNA sequences to GenBank. Essentially, there are two principal ways, [BankIt](#) and [Sequin](#). [BankIt](#) is a Web submission tool and recommended for simple submissions. With [BankIt](#) you can indicate coding regions on an mRNA along with a product and gene name. For more control over annotating your entry, segmented records, or very long entries, [Sequin](#), a stand-alone

submission tool, is suggested.

GenBank will provide you with an accession number to identify your sequence, usually within two working days, if the submission is received via electronic mail. This accession number serves as confirmation that you have submitted your data, and allows the community to retrieve the data upon reading the journal article.

The accession number should be included in your manuscript, preferably in a footnote on the first page of the article, or as required by individual journal procedures.

► BankIt - submitting via the WWW

NCBI has developed a WWW form, called BankIt, for convenient and quick submission of sequence data.

BankIt allows you to enter sequence information into a form, edit as necessary, and add biological annotation (e.g., coding regions, mRNA features). BankIt transforms your data into GenBank format for your review and when your record is completed, it can be submitted directly to GenBank. You have the option of adding information by using text boxes to describe in your own words the source of the sequence and its biological features. The GenBank annotation staff reviews the submitted textual information, incorporates it into the appropriate structured fields, and returns the record by e-mail for your review.

BankIt is compatible with Netscape clients for Unix, Macs, and PCs. In addition, Internet Explorer for the PC and Mac have successfully been used.

► Sequin - stand-alone software for the Mac, PC/Windows, and UNIX

If you do not have access to the WWW, NCBI introduces a stand-alone submission program called Sequin.

Sequin is an interactive, graphically-oriented program based on screen forms and controlled vocabularies that guides you through the process of entering your sequence and providing biological and bibliographic annotation. Sequin is designed to simplify the sequence submission process and to provide graphical viewing and editing options. It incorporates robust error checking and accommodates very long sequences and complex annotations.

► Special submissions - genomes, batch sequences, alignments

Sequin can be used for the submission of individual or small numbers of sequences. However, it was also designed to facilitate special types of submissions, and should be used

instead of BankIt for the following types of submissions:
genomes and other very long sequences; multiple sequences
such as batch submissions and segmented sets; and
population/phylogenetic/mutation studies.

When preparing the submission of a genome, you can import the complete genome sequence into Sequin as well as a file containing the amino acid translations in FASTA format, if available. Sequin will automatically annotate the coding regions intervals based on the translations, and you can use Sequin to make further complex annotations. Sequin can also accept feature annotations in tab-delineated tables. Since the final submission file (*.sqn) will be quite large, please send it to the GenBank staff via FTP rather than by e-mail. To request a temporary FTP directory, please contact genomes@ncbi.nlm.nih.gov.

When preparing a submission that contains multiple sequences, you can import a single file containing all the sequences in FASTA format, or as alignments in FASTA+GAP, PHYLIP, or NEXUS format. In addition, for population/phylogenetic/mutation studies, you can annotate one sequence and propagate the features onto the other sequences. When you complete the submission and select the 'prepare submission' option in the 'File' menu, Sequin will prepare a single *.sqn file that contains all the sequences. Send the *.sqn file by e-mail to:

gb-sub@ncbi.nlm.nih.gov .

If you are submitting two or more Sequin files, each of which contains multiple sequences, send each *.sqn file in a separate e-mail message.

Please refer to the Sequin Quick Guide and documentation for additional information, both of which are accessible from the Sequin Web page.

► Sending the Data to GenBank

When using BankIt, the prepared sequence entries are submitted directly to GenBank through the WWW.

When using Sequin, the output files for direct submission should be sent to GenBank by electronic mail to:

gb-sub@ncbi.nlm.nih.gov

As an alternative, the submission file can be copied to floppy disk and mailed to GenBank Submissions at:

GenBank Submissions
National Center for Biotechnology Information
National Library of Medicine

Bldg. 38A, Room 8N-803
Bethesda, MD 20894

Please label the disk with your name and file name and indicate whether it is a PC or MAC disk.

► Updates

NCBI processes update requests as well as new submissions. You can provide additional annotation, correct errors or omissions, or request the release of your "hold-until-published" record. BankIt or Sequin may be used for updates, or you can request changes as text in the body of an e-mail message. Be sure to give the accession number of the sequence to be updated along with all update information. Send it to:

update@ncbi.nlm.nih.gov

Submitters of a record maintain editorial control of that record. Any third party update information will be forwarded to the submitters of the record for review. Changes will be made to the record only at the submitters' request. If submitters can no longer be contacted, GenBank reserves the right to edit an entry to agree with the information presented in the original publication (s) cited in the entry.

► Submission of ESTs, STSs and GSSs

Batches of ESTs (expressed sequence tags), STSs (sequence tagged sites), and GSSs (genome survey sequences) can be submitted via special streamlined procedures.

► Submission of HTGS Records

The NCBI has developed a protocol for high throughput genome sequencing centers to use when they submit large genomic records (usually Cosmids or BACs). Specialized tools, including fa2htgs and a "genome center version" of Sequin, have been created to help such centers produce these submission files in a convenient way. The HTG page not only provides detailed submission instructions to genome centers, but also informs GenBank users how to access the HTG sequences.

► Confidentiality

Some authors are concerned that the appearance of their data in GenBank prior to publication will compromise their work. GenBank will, upon request, withhold release of new submissions for a specified period of time. However, if a paper

citing the sequence or accession number is published prior to the specified date, your sequence will be released upon publication.

In order to prevent the delay in the appearance of published sequence data, we urge authors to inform us of the appearance of the published data. As soon as it is available, please send the full publication data--all authors, title, journal, volume, pages and date--to the following address:

update@ncbi.nlm.nih.gov

► Submission of SNPs and other polymorphism data

Data on genetic variation in humans and other organisms can be submitted to the NCBI Database of Single Nucleotide Polymorphisms (dbSNP). Entries include single nucleotide polymorphisms (SNPs), small-scale insertion/deletions, polymorphic repetitive elements, and microsatellite variation. dbSNP is a separate resource from the GenBank database, and submissions do not receive GenBank accessions as noted above. However, dbSNP entries do receive dbSNP identifiers and contain links to associated GenBank records. Further information about submitting data is accessible from the sidebar of the dbSNP home page.

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Revised March 22, 2002